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AMERICAN FORESTS

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LILIAN CROMELIN

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THE COVER

"Winter Woodland—Ohio"
Photograph by John Kabel

American Forests

Published monthly by

THE
AMERICAN FORESTRY
ASSOCIATION

919 Seventeenth Street
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The American Forestry Association, founded in 1875, is a citizens' organization for the advancement of intelligent management and use of the country's forests and related resources of soil, water, wildlife and outdoor recreation.

Its educational activities seek to bring about a better appreciation and handling of these resources, whether publicly or privately owned, that they may contribute permanently to the welfare of the nation and its people.

In addition to publication of its magazine—AMERICAN FORESTS—designed to keep before the people of the country important conservation questions and issues, the Association carries on educational work in various fields including forest fire prevention, reforestation, protection of wildlife, prevention of soil erosion, preservation of wilderness areas, establishment of national forests and parks, advancement of forestry by private endeavor, the teaching of conservation in schools and the promotion of research in timber growing and forest utilization.

The Association is independent and non-commercial, and has no connection with any federal or state governments. Its resources and income are devoted to the advancement of conservation in the interests of public welfare, and all citizens are welcomed to membership.

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THE FOREST EXCHANGE . . .

We Thank You

SIR: I have just completed reading the article "Forest Shrine," by Charlotte Mackey, in the October issue, and as one of thousands of Christian laymen I wish to express my heartfelt appreciation for including the splendid article on a Christian activity which could well have been ruled out by an editor who was not sympathetic with the aims of the Mount Hermon conference.—*C. Davis Weyerhaeuser*, Tacoma, Washington.

Attention: Researchers

SIR: I would like to announce a new program of forestry research, to be carried on cooperatively between the Southern Forest Experiment Station of the U. S. Forest Service and the George Foster Peabody School of Forestry of the University of Georgia. The new program, part of a South-wide project, will include all phases of forestry research, with particular emphasis on problems of the Piedmont section. It will undertake the study of all forestry

problems within the area, combining the work on the Hitchiti Experimental Forest at Round Oak, Georgia, with work on forested areas near Athens.—*D. J. Weddell*, Dean, George Foster Peabody School of Forestry, University of Georgia, Athens.

Get Your Copy Now

SIR: The article on memorial forests in the November issue (How to Plan and Maintain a Memorial Forest), is one of the best I have seen on the subject, including community forests. It is well prepared and the fact that it lists the steps on how to go about the organization and management of such a project especially appeals to me.—*W. J. Barker*, Extension Forester, Clemson, South Carolina. (This article is now available in booklet form at ten cents a copy—*Editor*.)

Report From Norway

SIR: From a recent newspaper story I can pass on the following account of

forest conditions in Norway after the occupation. Except along roads and railroads, where the Nazis cut recklessly and did considerable damage, the situation is reasonably satisfactory. Considerable damage was done also in the northern part of the country, and here some years will be required to restore the balance between cutting and planting. Elsewhere, particularly off the main communication arteries, the forests have not been molested and replanting was carried on during the war at normal rate.

The newspaper account adds that a great deal of the cutting was for fuel rather than for timber, and therefore affected only less valuable growth. In some instances it was actually advantageous. For the whole country the chief forester estimates that 15 percent of the normal increase has been salvaged and that the forests generally are in reasonably good condition.—*Ted Olsen*, Oslo, Norway.

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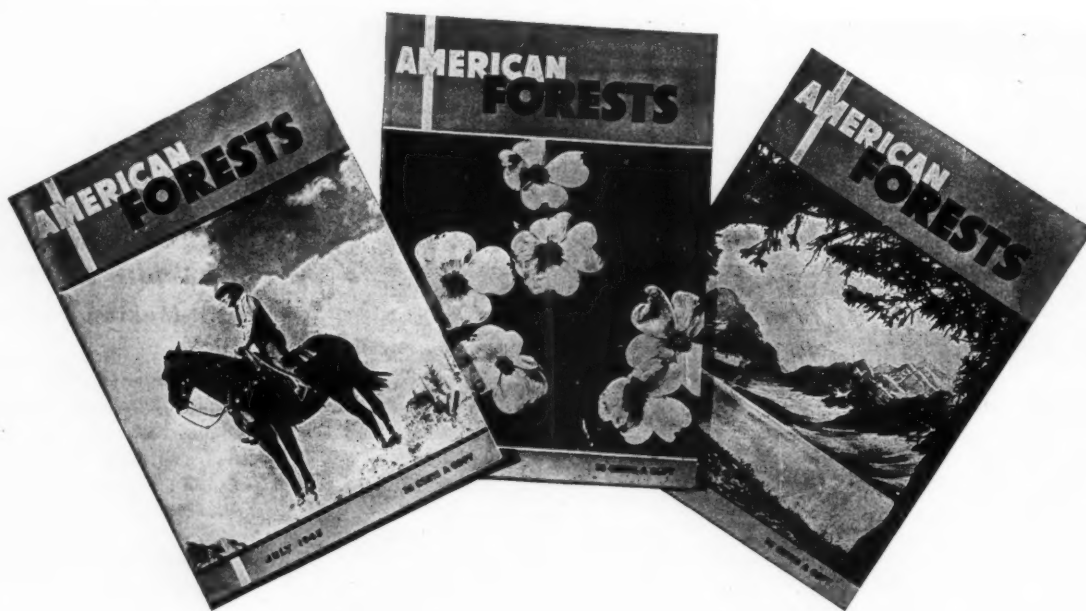
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Any one interested in our natural resources will find AMERICAN FORESTS especially helpful during 1946. It will carry information on all important conservation questions and issues, particularly as they relate to the post-war period. May we suggest AMERICAN FORESTS for that friend or business associate for whom it is always so difficult to select a gift? Consider also its value to your college, your school, or a library in your vicinity.

Christmas Gift Subscriptions to AMERICAN FORESTS will start with our January issue, but in addition we will send to the recipient a complimentary copy of this December number together with an appropriate Christmas Gift Card bearing your name as donor—both to reach the recipient in advance of Christmas day.

We urge your immediate action so that your gift subscriptions can be filled promptly.

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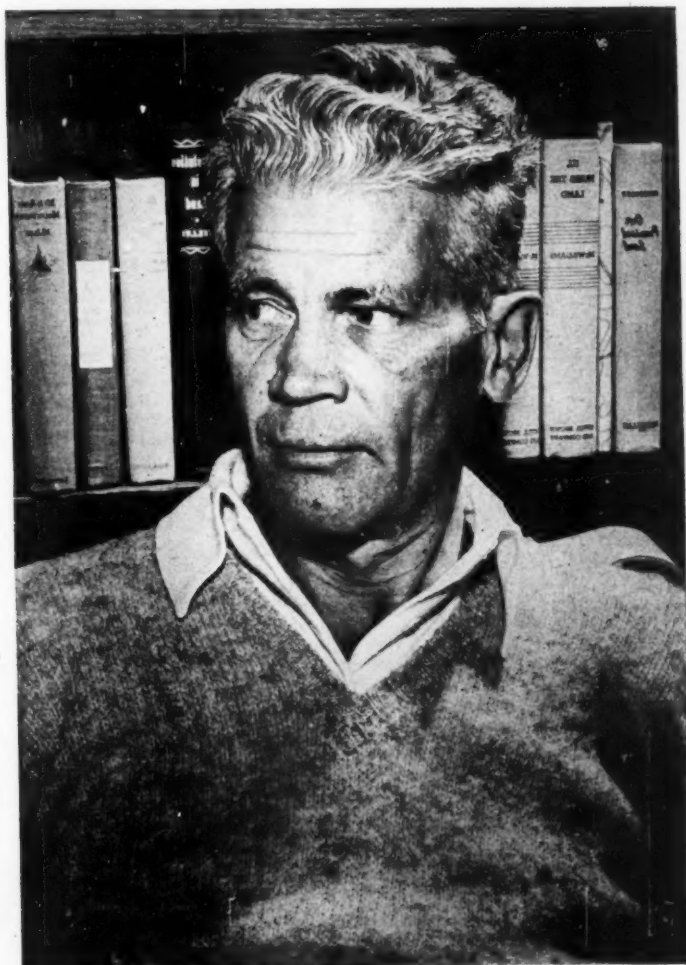
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My Favorite Tree

By STUART CHASE

Famous Economist and Author



WHILE atomic bombs break the world wide open, I try to patch it up in a small way by growing spruce trees. We have some acres of back pasture reverting to jungle on our rocky Connecticut farm. In 1938, we got from the state a thousand little trees, not more than eight inches high, and set them out amid the sumachs one showery April day.

There are now 649 left. The drought last year took a heavy toll. The smallest, known as Tiny Tim, seems to be in excellent health—and precisely the size we planted it! The tallest is nine feet eight inches. Twenty-two are eight feet or over; 271 are six feet or over. The largest single growth this year was twenty-five inches, and came out of a runt. The average growth was eleven and one-half inches, or twenty percent. Each year the percentage of growth declines—in 1941, it was thirty-five percent—but absolute growth increases slowly.

The pesky things are like children. I feed them, measure them, and try to keep them from harm. So willy nilly, white spruces are my favorite trees.



Christmas at Timberline . . .

Mount Hood, Oregon

EDITORIAL

WANTED—A PUBLIC LAND POLICY

THE American people rightfully look to the federal government for leadership in the protection and development of the natural resources of their country. Nowhere is this leadership more urgent than in the case of resources embraced in the public lands of the United States which are the property of all the people. Here leadership is an exclusive and definite responsibility of government because it occupies the position of custodian.

The average citizen little appreciates the extent or the resource value of the public lands of which he is a part owner and in which he has a personal no less than a national interest. Today these lands aggregate almost 400 million acres in the continental United States and an equally large area in Alaska. They contain forest, mineral, forage, and wildlife resources of tremendous value, not to mention incalculable values of water and soil protection and recreation.

Leadership in the management and development of these resources is a great responsibility. The people have entrusted that responsibility to the federal government. Its leadership necessarily stems, first, from the Congress which makes the laws and policies in respect to management, and second, from the executive departments delegated to carry out the policies established by Congress.

Considering the values and national interests involved in the public lands, one might assume that their owners—the people of the United States—could depend upon the vigilance and constructive leadership of the government to protect and develop them with outstanding efficiency and economy. Unfortunately this is not the case as evidenced by the fact that our public lands history is replete with scandals involving mismanagement. These resources have always been the target of individuals, groups and special interests seeking to enrich themselves at the expense of the owners—the general public. Vigilance on the part of the public, therefore, to see that Congress adequately protects and manages them has through the years become increasingly necessary.

Now that the war is over and the need of maintaining and upbuilding the country's natural wealth is more self-evident than ever before, public vigilance unhappily continues imperative. Bills which seek to dissipate or impair public land resources continue to be introduced in Congress. Two pending in the present Congress will serve to illustrate. One, S. 1156, introduced by Senators Hatch and Chavez of New Mexico, would turn over to that state 10 million acres of public lands for the use and benefit of state institutions. The New Mexico Home and Training School for Mental Defectives would receive a million acres, the New Mexico Museum another million, the Girls Welfare Home 500 thousand, the state capitol (for remodelling) two million, etc.

In brief, Congress in passing the bill would make an outright gift to the State of New Mexico of 10 million acres of land belonging to the people of the United States. The conservation, development and management of the gift lands would thus pass from the federal government to the state. In the past many millions of acres of public lands have been given to western states for school and other purposes. One needs only to study the record of state stewardship of granted lands to know that in the great majority of cases, the gifts have turned the clock of conservation backward.

In this respect, a critical feature of the bill in question is that it would permit New Mexico to select lands now embraced in grazing districts established under the Act of 1934. Such selections could readily disrupt and disorganize the conservation program of regulated grazing which the Department of the Interior has put into effect during the past 10 years.

The second bill, S. 1402, introduced by Senator McCarran of Nevada, likewise could readily break down the system of regulated grazing and conservation management developed under the Act of 1934 in that it would give the users of any grazing district the right to dissolve the district by a 60 percent

vote of the users. Once a district is dissolved, the grazing lands would be open for leasing and reversion to unregulated grazing which the Act of 1934 was specifically passed to stop.

Both bills, in our judgment, represent backward steps in the conservation handling of public resource lands. If passed they might easily usher in a new era of grabbing and wrecking public resources. It is obvious that once a western state is given a large grant of land as provided by S. 1156, other states will be quick to push political claims for similar grants. It is also obvious that once stockmen are given the legal machinery to vote out regulated grazing on the public lands, the government's conservation control of the public ranges will be broken.

Federal policies in respect to the conservation and management of public lands is the result of piecemeal legislation down through the years. It is a patchwork of laws, policies, bureau administration, divided management and general confusion and opportunism. There is no overall public land policy, a fact which continues to invite attempted inroads upon public resources by political and special interests.

Viewing the future security and welfare of the United States, we can think of no field of conservation in which the leadership of the federal government is more immediately urgent than that embracing our publicly owned resources. It should be a leadership that sets a standard for the states, for industries, and for the owners of essential natural resources. Action in this direction, we think, is a postwar obligation to the people on the part of Congress. It begins with a thorough survey and classification of the public lands and their resources and ends with the formulation—as promptly as possible—of a national policy of administration, protection and development that will be so clear-cut and firmly established that it will discourage attempted raids upon public resources and will assure the people that their natural wealth is safely fortified against dissipation.



The author, professor of tropical forestry, Philippine Forest School, had his prison built around him

THREE YEARS IN A JAP PRISON CAMP

An American Forester Tells of His Internment, His Dramatic Rescue—and of War's Effect on Philippine Forestry

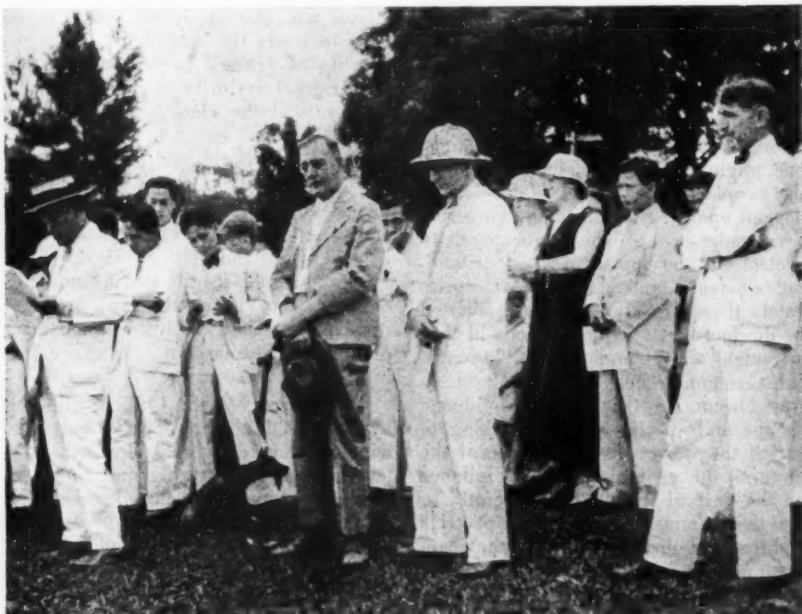
By HUGH M. CURRAN

ON Christmas Day, 1941, Jap bombs fell near the campus of the School of Forestry of the University of the Philippines at Los Baños, where for 14 years I had been professor of tropical forestry. Their spine-chilling blasts, though I did not fully recognize it at the time, announced the beginning of an experience few foresters have had—or would want. That eruption of fire and steel also had another meaning, a more tragic one. It meant that progress in tropical forestry in the Philippines, with which I had been associated since 1905, was to suffer a lethal blow. In the months of bitter warfare ahead records of 40 years of research and work were to go up in flames, and trees growing on the school's experimental areas, sources of information on growth from nursery to maturity, were to be cut by the Japanese or reduced by shellfire to burned, splintered stumps.

Those death-dealing Christmas pres-

ents showered on us by Hirohito's air-men were harbingers of uncertain fate for the entire personnel of the college. My wife and I, though prisoners of the Japanese for three years, were more for-

tunate than many. For one thing, we had the unique distinction of having our prison built around us right on the campus. Furthermore, aside from a diet that continuously exposed us to the dan-



Of the old force of American foresters, only these three—Cuzner (left), Fischer (center) and the author (right) shown here attending a tree planting ceremony—were in the islands when war broke out

ger of beri beri, we saw little of the horrors that came to so many prisoners in other camps. Indeed, our greatest concern came on the eve of liberation—fear that we might be murdered before our troops could fight their way to us.

We took to the forest high on Mt. Makiling following that fateful Christmas day four years ago. There we built camps, temporary ones, of course, because we had to move from time to time to keep our location secret—or at least we thought it was secret. Later we learned that our presence in the forest was known to the Japanese. Life under these conditions was not all that could be desired, but everything considered it was not too bad, except for the women and children who were unaccustomed to jungle life. We lived in tents and cooked over wood fires. Food was sent in stealthily by our Filipino friends.

These friends, it should be mentioned, were part of the college personnel and had fled with us. But when the Japanese assured them—all Filipinos—that they would not be harmed, that they, the Japs, had come to help and free them, our friends returned to their homes. Americans, of course, were given no such assurance. So with a party of 21 of my own countrymen, including five children, and a few Filipinos who elected to stay with us, I remained in the forest until the surrender of General Wainwright on Bataan. Of this party, I alone had experience in jungle life.

The necessity of maintaining constant patrols, in addition to foraging for water, food and wood, proved a severe physical strain. As a result, there was some illness. Indeed, it was because I was over-worked and fever-ridden that my wife and I, when finally we left our



Hiding out on the forested slopes of Mt. Makiling, the author, with a party of other Americans, dodged the Japs for days

On Christmas day, 1941, Jap bombs dropped near these buildings (below) on the campus of the School of Forestry at Los Banos



forest hideout, were placed in the college infirmary instead of being sent on to Manila for imprisonment.

As may be expected from one who has devoted so many years to tropical forestry in the Philippines, I thought much during those hideout days of the progress that had been made—a forestry achievement that will live always, I am convinced, to the great credit of American foresters. Time and again the names of Ahern, Pinchot, Bryant and others who pioneered in modern scientific work in the islands flashed before my mind. So did those of a later group, my companions during the period from 1905 to 1913 when the forest areas, island by island, were mapped and the lands classified. Among them were Merril, Whitford, Foxworthy, Matthews, Merrit, Cuzner, Shfersesse, Nash and Everet.

What a job they did! Fresh from setting up remnants of America's timberlands as forest reserves, this early group of foresters took a lesson from home experience and saved for the people of the Philippines one of the finest forest areas in the world.

Under the wise administration of Arthur Fischer (now Colonel Fischer), the last American chief of the Philippine Forest Service, that organization grew and prospered. And with it a huge forest industry, one of the greatest sources of employment and creation of wealth in the islands, was developed. Indeed, this industry, before Pearl Harbor, was probably the most modern and profitable of all tropical lumbering.

Equally important to Philippine forestry is the fact that there was at the outbreak of war a well trained and efficient group of Filipino foresters, developed for the most part at the School of Forestry at Los Baños. What happened to these men during the years of Japanese occupation is not known. It is to be hoped that the great majority survived, for in their hands rests the future of the forests of the Philippines.

Of the old force of American foresters only three were in the islands when war broke out—Fischer, Cuzner and myself. Fischer's story is well known (see *AMERICAN FORESTS*, July, 1942), particularly his escape to Australia, and thence to the States, with a supply of cinchona seed to establish in the American tropics an emergency source of quinine. Cuzner went to Manila and eventually landed in Santo Tomas internment camp. I alone of this group had some first hand knowledge of what happened in the forests during the months that followed.

Almost daily trucks loaded with construction material and fuelwood passed my internment camp; I knew that fuel for a nearby sugar mill came from the

forests of Mt. Makiling and produced alcohol for Jap transports. I also knew that trees planted by students of the School of Forestry, along with other fine stands, were cut by the Japs for bridge construction, for building wooden ships, for fuel and for many other purposes. The school plantations boasted trees 100 feet high, and included teak and Honduras mahogany.

Yes, I thought much about what had been achieved in Philippine forestry during those days we struggled to survive on the slopes of Mt. Makiling. And they were comforting thoughts—even while I was burning with fever and when word was received that the Japanese were bringing pressure on the college authorities to get us down from our forest hideout.

And eventually that pressure worked, though in an amusing way. The Filipinos, of course, knew exactly where we were as they had been providing us with food. Even their doctors visited me. The Japs, it may be assumed, knew all about this, yet when they questioned the college authorities they were told the exact location of our camp was unknown but that guards would be dispatched to try and locate it. The Japs accepted this, so guards were sent out to return with the news that they had succeeded in contacting us. Whereupon the mayor of Los Baños sent his truck and returned us and our belongings to the college campus. It was a neat trick of face saving on both sides—Filipinos and Japanese. But it left us squarely in the middle, wondering what would happen next.

It happened quickly enough, though not quite as I expected. Instead of sending my wife and me along with the other Americans in our party to Manila to be interned in Santo Tomas, we were placed in the college infirmary at Los Baños. And there we remained under the Japanese, but cared for by Filipinos, until I regained my health. The main factor in this, of course, was the wonderful care given me by my wife, both in the forest and at the hospital, and the fact that we were not separated.

While in the infirmary we lived pretty much as we had before the war. But this changed rapidly when, later, the school at Los Baños was made an internment camp to relieve crowded Santo Tomas. Temporary barracks of bamboo and palm leaves were built and eventually, early in 1943, more than 2,500 prisoners were moved there. Thus, as mentioned earlier, my wife and I had the unique distinction of having our prison built around us, as the hospital was inside the barbed wire fence enclosing the internment camp.

The first and most acute change was in the quality and quantity of food. Al-

most immediately we were put on a meager ration of rice, ground corn, coconuts and occasionally a little meat, mainly for stews and soup. Realizing the danger of beri beri from such a restricted diet, most of the area inside the fence was put into gardens. From these we obtained leaves of sweet potato vines and pigweed, squash tips and flowers. And, in limited quantities, there was okra, eggplant, sword and butter beans, the fruits of papaya and some poor tomatoes.

As war came back to the islands with the American landings in Leyte and Mindoro, food became scarcer and scarcer and we resorted to eating the leaves of many weeds, bushes and trees, and the roots and stems of certain plants. I was constantly in demand by the foragers to determine whether the plants they had collected would serve as food or whether they were poisonous. Some were not wise enough to inquire about this and became very ill. In one case a collector ate the nuts of a small tree, a close relative of croton oil. His condition when rushed to the infirmary can easily be imagined.

One point in our favor—and it was an important one—was that the Japanese did not loot prisoners in our camp of money and personal belongings. Thus, those who had funds were allowed to purchase fruit, vegetables, peanuts, a few eggs and a little meat, tobacco and other things through the prison guards. At one time we purchased sows and a boar and raised 400 hogs, which were killed weekly to add strength to our diet. Fortunately, up until the last month of our imprisonment, my wife and I were able to supplement the small rations and keep in fairly good health.

We were also fortunate in having American doctors and nurses to care for our sick and, with the exception of beri beri due to the food situation, the camp was nearly free from serious illnesses. We lost but few of our friends in the early days. Later, however, the death rate mounted to at least one a day.

The Los Baños camp was organized much as a small town. We elected our own officers, had crews that kept the place clean, that cooked the food, that grew the vegetables, and that cared for garbage, water and the toilets.

Morale was splendid, and after the Leyte and Mindoro landings when great fleets of our planes passed near the camp, everyone rushed out from the barracks full of hope that the end of confinement was near.

We saw little of the horrors of war. Two men foraging for food outside of the camp were shot by the guards. One, a good friend of mine, was a very useful member of the camp, as he had

(Turn to page 616)

The First American Christmas Tree

Some Important Discoveries Have Been Made, But the Search Goes On For the Origin of the Happy Custom in This Country. Perhaps You Can Help

By WILLIAM I. SCHREIBER



The earliest authentic record of a Christmas tree in America dates back to 1834, in Philadelphia



The National Christmas Tree—since 1925 the medium of the President's Christmas message to the nation

ANY effort to trace the origin and development of the Christmas tree, along with the adornments and gifts associated with it, would lead far into the realm of legend and speculation. The custom, it is known, was prevalent in Germany during the middle of the eighteenth century; and there is record of a lighted tree in Strassburg as early as 1604. It was introduced into France in 1840, and into Windsor Castle by Prince Consort Albert in 1841. But beyond these historic dates is a trail of legend and tradition that travels far back into the ages.

However, no mythology and religious mores combine with or are indigenous to the first American Christmas tree. Because of this, and because ours is a young nation and its settling not beyond historical research, it should be possible to establish with a fair degree of certainty the place, time and originator of the happy custom in this country.

Americans should be particularly interested in this, for while many nations and peoples have contributed to the establishment of the custom, no country and no people on earth have gone into it so elaborately, so intensely and so commercially. According to Professor Nelson C. Brown of the New York State College of Forestry, the nation was spending in 1941 around \$25,000,000 for Christmas trees and evergreen decorations. That's big business. And it does not take into consideration the large industry supply-

(Turn to page 622)



The peaks of Glacier Basin glistened in the sun

WORLDS BEYOND OURS

The Wonder and Grandeur of
Nature Help Us See Our Bur-
dens in Their Proper Size

By H. G. WILM

THROUGHOUT the recent years of conflict and sadness, the peoples of the world have felt burdened by the weight of work or hunger, or grief at the loss of possessions and of those who are closest to them. The soldier has lived in mud and darkness, listening to the wings of death; civilians in the warring lands have seen all they loved and cherished snatched from their hands; and in our own country millions have been oppressed by the shackling bonds of overwork and all the other irritations of wartime life.

But now, although the scars of war may fester for years to come, our worst experiences have moved into the gloomy shadows of memory. Now it is time to look around and find the joy and beauty of life once again. Black as our world has been during these hard years, its griefs have cast only a passing shadow.

If we can climb out of this darkness even for a moment, perhaps we can see our burdens in their proper size, diminished by the shining spaces of worlds that spread beyond ours.

Let me illustrate: On a sparkling summer day, lighted with clouds and snow-clad peaks, I was climbing toward the wide-flung headdress of Chief's Head Mountain in the Colorado Rockies. Starting in the gloom of dawn I had already passed through the cold darkness of pine and spruce forests, catching occasional glimpses of the glow of mountain summits in the sunrise. Moving by the somber mirrors of lakes trapped in old moraines, I at last reached the rocky tundra of timberline. There I stopped to rest and look, drinking in warmth from the climbing sun. Close by was a meadow, with a talkative brook winding across the tundra on its way

from distant cliffs to the lakes below. Long's Peak towered in the east, the turrets and couloirs of its great west flank still cold with shadows. Behind and to the west, other peaks of Glacier Basin glistened with snow in the sun.

Ahead lay all the valleys of my world. First came the mountain canyons, studded with lakes and shadowed by black and emerald forest. Below were spread the cliff-bound meadows of the foothills, with a tiny village shimmering in the sunlight. And finally, bathed in purple haze, the cloud-marked blanket of the grassy plains stretched in undulating patterns to a remote horizon. What a big world this was!—how far it reached! What a great feat it seemed, to climb so high and see so far!

Then I drank from that little, gossiping stream. Lying flat, I bent my head into a shady sedge-lined pool, and after

drinking I lay for a while and looked deep into the clear, dark water. As I looked, the pool grew bigger and deeper; sedges and weeds became large trees, and mossy rocks swelled into grass-covered hills. Here was another world, surprisingly like mine; and not so small at that. But what was this agitation down below the water? Someone lived here, and he seemed to be disturbed that I should invade his land, threatening the simple pattern of his life. As I looked closer I saw it was a caddis-worm, excitedly dragging his heavy rock house to the shelter of a rocky crevice. Far from human wars, deep in the silence of this mountain slope, even he could not have peace: fearing invasion, he felt compelled to save his life and all his property by going underground.

But I did not want to start another war, so I withdrew quietly from his world and sat back to look at mine once more. At first the change was so immense that I was dazed and giddy, unable to grasp the vastness of my sur-

roundings. Even the nearby rocks seemed huge, and distant scenes were a foggy blue infinity of unmeasurable distances. But then, little by little, my mountain world contracted and I could look again into the shining vistas of peak and plain, contented with my size and long-range vision as compared to that tiny creature at my feet. Mine seemed a large and lovely world compared to his.

Suddenly a rhythmic sound struck into the peaceful quiet of my world. Almost beyond sight, so high it was, a silver plane appeared above the peaks, throbbing its determined way across the sky and vanishing beyond the plains. And then I thought: to the pilot of that plane, in his strange realm of endless horizons, my broad world was just a fleeting incident in an ever-changing landscape. To him, my forests of spruce and pine were like a sedge-grown bank and my tundra meadows like a moss-covered rock. Even my great mountains were no more than a wrinkled carpet, spread out be-

low him for a few seconds until he soared beyond the skyline. Looked at with his larger view, my world must seem no wider than the caddis-worm's.

Yet even this traveler of the heavens was earth-bound. Like the caddis-worm and me, he was yoked to the dragging weight of the world and must soon come down again to all his human woes. Still he, and even I, could climb above our troubles for a little while. Though we might be pressed by conflict, by all the petty grievances of life, still we could find peace and breadth of vision in the shadowed pool, in the blue expanse of mountains and plains, and in the boundless distances of the cloud-lit sky.

So can we realize how small our burdens are; and we can see the grandeur of other worlds, stretching far beyond the caddis-worm's and ours. We only have to lift our eyes for a brief moment. Though at first we may be dazzled by the splendor of a greater world, then we can look beyond our griefs into the sunlit beauty of infinity.



Long's Peak towered in the east, the turrets and gorges of its massive west flank still cold with shadows

GIVING THE FOREST BACK TO THE INDIANS

By EDITHA L. WATSON



Now that they may claim undisputed ownership of all timberlands in their reservations, the Menominees, one of the few self-supporting tribes, look to their program of sustained-yield management for lasting security

ON JUNE 22, the United States Government gave the State of Wisconsin its certified check for \$1,590,854. This was in exchange for approximately 34,000 acres of swamp land within the boundaries of the Menominee Indian Reservation in central Wisconsin. There is an interesting story behind the transaction—a story that began nearly a century ago.

On September 28, 1850, there was enacted a law known as the "Swamp Land Act," which gave to the states title

to all public domain swamp land—defined as 40-acre tracts more than half of which is swamp—within their respective borders.

In 1854, a treaty was made between the United States and the Menominee tribe, in which the Indians were given the land which is their present reservation of approximately 234 thousand acres. Within this reservation lay the 34,000 acres of swamp land just purchased. While the Menominees understood it to belong to them as part of

their reservation, the State of Wisconsin claimed it under the Swamp Land Act.

A controversy, which was to last until the present day, developed between the state and the federal government, and was attended by considerable litigation. In 1926, the United States Supreme Court, in the case of the United States v. Minnesota, finally held the Swamp Land Act granted the lands to the states. The effect was that the Menominee tribe under the treaty with the United States did not get title to the swamp lands

within the boundaries of their reservation. In 1935, however, Congress granted the Menominees, since they had lost their swamp lands, authority to sue the United States and find out whether they were entitled to the value of the swamp land. On December 1, 1941, the Court of Claims decided that this value was recoverable, and also the value of the timber which had been removed from the lands.

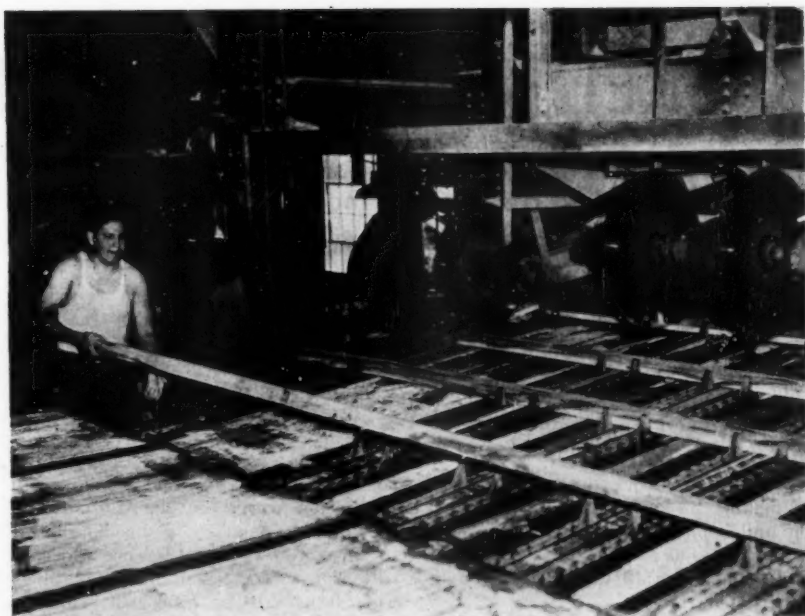
In accordance with the jurisdictional act of September 3, 1935, which provided that the United States might, in lieu of paying the acquisition costs, acquire and hold such lands in trust for the sole benefit and use of the Menominee Indians as supplemented by the Act of May 29, 1944, the tribe agreed to accept the land rather than a money recovery because it saw the advantage of owning all of the land within the exterior boundaries of the reservation.

(Eight other suits, aggregating \$9,000,000, are still being pressed by the Menominees, claiming mismanagement of their timberlands by the federal government. The Act of March 28, 1908, authorized the government to conduct logging operations for the tribe.—*Editor.*)

These swamp lands contain considerable fine timber. This added to present holdings, forms a valuable timber surplus for the tribe. Another thing, foresters through the years had to protect the timber on these swamp lands from fire—this despite the fact the timber could not be utilized on the areas for the Indians.

The Menominees are allowed legally to cut 20 million feet of timber a year in accordance with the Act of March 28, 1908, which was sponsored by the late Senator Robert La Follette, Senior. The forestry work in connection with the tribal timber enterprises is under the supervision of the Forestry and Grazing Division of the Office of Indian Affairs. Timber is being cut on a light selection basis with the removal of up to one-third of the net merchantable volume. It is planned to operate the areas of mature timber on a 10-year cycle.

The acquisition of the disputed areas will facilitate the sustained-yield timber operations of the reservation. The Menominees and their descendants, barring some unforeseen cataclysm, and carefully observing the present regulations for selective cutting, will be enabled to approximate their 20 million feet of lumber annually. Under careful management it is expected that the annual growth in time will substantially exceed 20 million feet. This, to a tribe which lives and is self-sustaining from



Profits from their modern sawmill have enabled the Menominees to pay for a large part of their educational and health facilities



the profits and wages of its sawmill, means security for the future.

The mill itself, situated on the reservation at Neopit, is a fine electrically-operated set-up of which the Indians are rightfully proud. In spite of the many Menominee men who have been at war, they have managed to keep two shifts working. This is due to the efforts of the women, who are efficiently handling many mill jobs. Girls and women also work in the forest, fighting such enemies of the trees as blister rust, driving trucks, and taking over such essen-

tial jobs as they can handle. Last year the sales of lumber and other products amounted to more than a million dollars. Profits from their tribal industry enabled the Menominees to pay for a large part of their educational and health facilities as well as general living expenses. This is one of the few self-supporting tribes—and it is proud of it.

The check which the United States gave for the swamp lands is, by the way, the first and only certified check ever drawn on the United States Treasury.

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BASKET MAKER OF DIVIDING CREEK

Clarence Morgan of New Jersey Has Made White Oak Baskets For a Half Century So He Can Be "Independent the Way the Good Lord Intended"

By ALDEN T. COTTRELL

"SURE, I could make six dollars a day at the sand plant, but I like to work when I feel like it. I like to be independent the way the good Lord intended people to be."

This was the answer given by Clarence Morgan of Dividing Creek, Cumberland County, New Jersey, when asked why he didn't work for wages instead of making baskets for a living. His is the philosophy of one who certainly does as he pleases as far as work is concerned and who, above all things, hates to be regimented.

Although old-time white oak basket makers are scarce today, they were common enough 50 years ago. As David Vail, Morgan's neighbor, remarked,

"Whole families have been raised on baskets." Clarence Morgan said that up in Hardingville where he was born, every Morgan made baskets. His father, who died at 82, was a basket maker all his life. His grandfather, Abram Morgan, also made baskets, but he wasn't sure about great grandfather Bodo Morgan. However, a little arithmetic soon proved that the Morgan family has been engaged in this handicraft for over 100 years. Clarence Morgan, who is now 60, began making baskets when he was 10, so he is just rounding out half a century at what once was considered about the "meanest" form of earning a livelihood.

What kind of baskets does he make?

Almost any kind—fire-place, bushel, general purpose, clothes, bicycle, fish, oyster and cantaloupe baskets, anything but an eel basket which he won't touch. When he has to make a new style basket he first must make a form over which it can be built. Recently he built a form for a new style fish basket, hollowing it out of a cedar log and padding the outside with strips of wood until he had just the right shape. This job required three days. He sold \$62 worth of baskets made on this form in a few weeks.

Morgan works only in oak and will have nothing to do with ash or willow. "I never made a willow basket in my life," he said. "That's a different trade."

Under present conditions, with other materials difficult to obtain, the demand for wooden baskets is so great that he gets little peace, even in church. When he goes to camp

meetings in Haleyville all the good wives roundabout want to know, "When will the clothes basket you promised me be ready?"

"Why I could make nothing but clothes baskets all next winter," he said.

His home is old and picturesque—so old that no one seems to know when it was built. In the winter he works indoors. But in May he moves his "shave horse" and "post and spindle," along with grandfather Morgan's old stool, which he still uses to start round baskets, and his tools out under a weeping willow tree. There, beneath its dense shade, he works until cool days drive him indoors again. So completely is he hidden by the thick growth of the willow that he cannot be seen from the highway 15 feet away. When he comes out into the sunshine he parts the drooping branches like the flaps of a tent.

Clarence Morgan is no recluse; he likes company. Beneath his willow tree, opposite the working tools of his trade, he has built a number of Adirondack-type chairs and the villagers drop in now and then. As he put it, "Some come to snooze and some to talk." On one recent afternoon his first visitor was a boy who rode into the yard on a bicycle. He said very little but watched. Next came a villager who silently slid into a chair, gossiped a while and just as silently disappeared. Next came Joyce and Judy Porter, three-year-old twins, with their granddaddy, and finally David Vail, his next door neighbor, who had finished cutting his field of salt hay and was anxious to cool off with a succulent watermelon. They all agreed Clarence Morgan was clever and a first-class basket maker, but that they themselves wanted nothing to do with basket making. It fascinated them to see him shave an "upright" or "filling" to paper thinness with a drawknife without cutting it in two.

In basket making the first step is to secure good white oak logs with a straight grain. Morgan gets his logs from the sand company and, in exchange, makes them a basket now and then. He claims he can tell a good basket log and the straightness of the grain by looking at the bark, but is ready to admit that he "sometimes gets fooled."



Generations of Morgans have been basket makers. Clarence, now sixty, began when he was ten

In his own words: "I walk around the tree like an Indian and look it over carefully. Usually a tree that has moss growing around the butt is a good basket tree. If it don't work up right, I throw it in the woodpile."

Only six feet of the butt end of the tree is suitable for baskets. But nothing is wasted. The rest of the tree Morgan uses for fuel; even the shavings are carried to salt meadows and dumped on the roads.

Morgan splits the butt log with an ax, a mallet made out of a walnut knot and wooden wedges. The log is then cut into quarters, eighths and so on until pieces of the desired size are obtained. This is known as "bolting out."

The bolts are cut different sizes because there is variation in both the width and thickness of the splints used for either "uprights" or "filling," depending upon the size and style of the basket and the use to which it is to be put. The bolts are squared up on the "shave horse," a device which holds the wood firmly in

place so that it can be shaved with a drawknife. After the squaring-up process, a cut is made in the end of a bolt and, using both hands, Morgan pulls the wood apart. This is called a "run." Then another cut is made, the strip pulled off, and so on until the entire bolt has been "run."

There are then perhaps a dozen strips one-eighth of an inch thick and six feet long which must be smoothed up on the

"shave horse." The general term "splint" is applied to strips used for basket making, but to Clarence Morgan the main supports of the basket are "uprights" and the material woven over and under them is "filling."

For making splints from bolts which do not "run" well by hand, he has an ingenious splint-cutting machine. It consists of a pair of tongs attached to a rope which passes overhead through a pulley to a drum. In operation, the tongs are attached to one end of a bolt and as the drum is turned by crank the wood is pulled against a plane blade. The thickness of the strip thus cut is governed by the angle of the blade.

After the "uprights" have been placed on the form and bent into position, the form is put on a spindle and the basket maker rotates it as he weaves his "filling" over and under. This is called "running up" a basket.

In starting a round-bottomed basket the "uprights" are crisscrossed like the

(Turn to page 622)



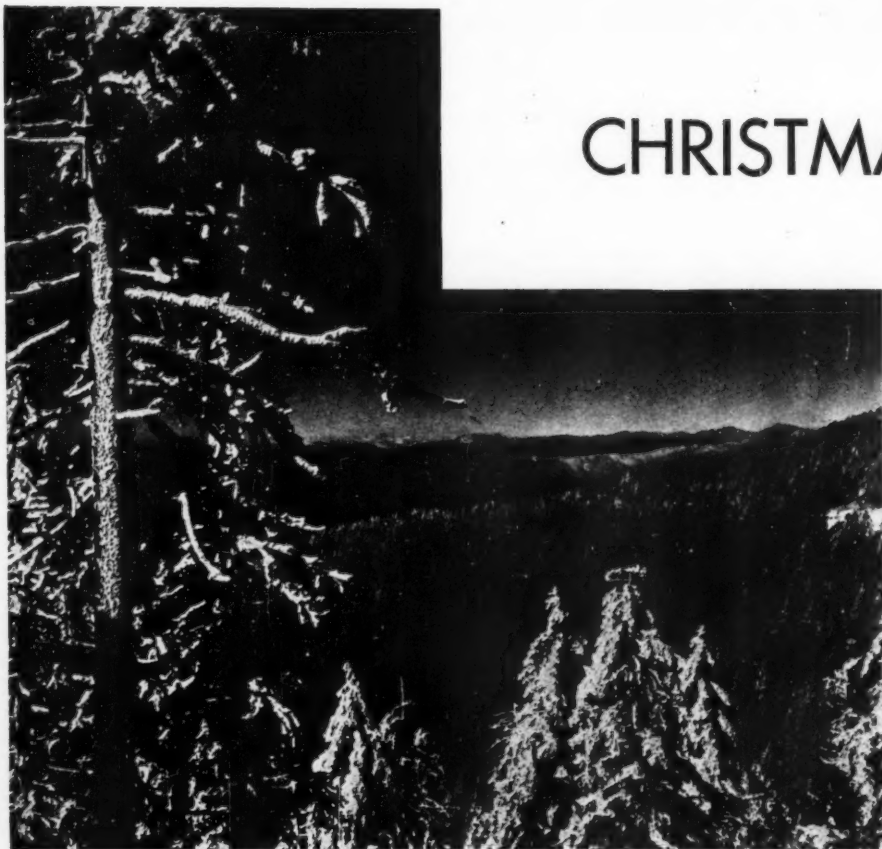
While neighbors look on, the basket maker, using a drawknife, smooths up strips of "filling" on a "shave horse." He works only in oak



Left—a bicycle basket is "run up" over a wooden form. This is essentially a weaving process

Right—Morgan uses his bare foot to hold the framework of a round-bottomed basket in position





CHRISTMAS BUCK

When Frank Corley and His Neighbors Decided They Wanted a Game Preserve, Things Began to Happen in Georgia

By

CHARLES ELLIOTT

A hundred miles to the north lay the Appalachian Range

ALL day the skies had been the color of old lead, and the wind that danced with a whirling mass of leaves in its arms was spitting fine grains of snow.

Several times the trail had almost disappeared in the brown leaves. It had grown narrow and steep, hugging the rocky bosom of the mountain. Now it leveled out into a little gap between the hills.

Frank Corley came out of his swinging stride and squatted on his heels. The movement was so sudden that I stumbled against him. He hardly noticed. His eyes were as bright as the newly-sharpened steel of my hunting knife.

"It's that big buck," he said.

I squatted beside him while he carefully pulled away fragments of crushed leaves. The damp earth had recorded a split-hoof track as wide as the four fingers on his stubby hand.

"I'd like for you to see that critter," Frank said, "but keep your eyes open. He'll rip out the seat of your pants before you know he's anywhere around."

He grinned at the question in my eye

and walked on up the hill with the distance-eating stride of a man who has spent his life in the woods.

We stopped on Chestnut Knob. It wasn't much of a knob and hadn't seen a chestnut tree in half a century, but from its crest, which was thinly clothed in scrub oak and seedling shortleaf, the whole northwest corner of the county flowed away from under our feet.

This was my first look at the most unusual game preserve in the state of Georgia. This was the Piedmont of the South and properly named. A hundred miles to the north lay the Appalachian Range. A ridge, branching off from the high Appalachians, ended here in a jumbled mass of hills and coves and valleys. I dug my hands into my pockets and braced myself against the flying ice particles while Frank Corley pointed out familiar landmarks.

"There," he said, indicating a field that looked like a postage stamp, "is where old Gene Tolbert lives."

I remembered the name. Gene Tolbert was one of the deputy wildlife rangers we had appointed to help watch

over this 192 thousand-acre game tract. I'd never seen him, but Corley said he was built like a rawhide string and just as tough. He went barefooted 11 months out of the year and kicked the blackberry briars out of the trail with his shoeless feet.

Two more small clearings sprawled against the bare earth. That was all. The rest of the world, as far as we could see, was filled up with oak and pine, was half crushed by this wall of wind that moved through it out of the north.

"What about that buck?" I asked.

"I'll tell you about him. But right now, I want to show you something."

We were swinging along the trail again, plowing through drifts of leaves, watching for anything that might happen in this winter wilderness. The forest pathway led away from the ridge, down past rough granite walls, into a narrow valley filled to the brim with laurel and pine and a tinkling stream.

Watching the lithe rhythm of Frank Corley's body, I suddenly thought that this was surely not the awkward farmer who had stumbled into my office more

than a year ago and sat on the edge of a chair, while the other members of his group lounged against the office wall, refusing seats.

"We've jest come back," he said, a little uncertain of his words, "from the mountains, where we killed a buck deer and two gobblers."

I had congratulated him on his luck. He appeared not to hear me.

"We've been thinkin', these fellows and me," he said, indicating his companions with a sweep of his ponderous hand, "that we can have jest as good a huntin' up in Paulding County as them fellows in the mountains."

"Sure you can," I agreed.

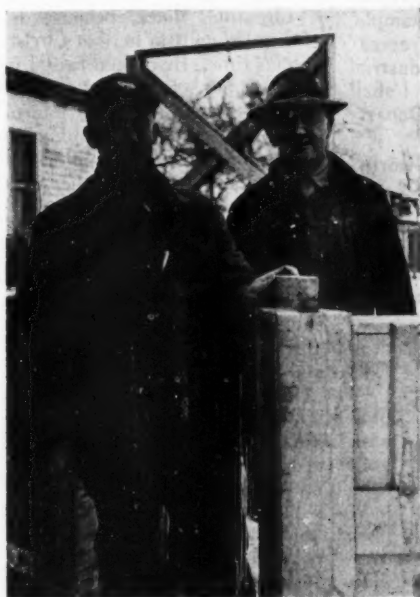
He looked at me half slyly and the others of his committee shifted from one slouch position to another.

"We want you to help us," he said.

I have talked with a good many state conservation officials and I find that all have the same trouble. Almost every visitor who does not want something outright, wants to organize a cooperative game and fish project. And a majority of those figure that, in any such cooperative project, the Game Commission should do all the operating.

I have found it necessary to devise a little system for such requests. When potential cooperators come into the Georgia Game and Fish office, we usually outline four or five steps that the cooperator must take before our department can make a move. Consequently, some 98 percent of our would-be collaborators never return.

"It takes a lot of land for deer," I explained to Corley.



Corley (right) went to Wisconsin for deer to add to the herd

"We may not have enough," he apologized. "All I could git together was about 192 thousand acres up in the corner of Paulding County."

"That should be enough," I admitted, a bit breathlessly, "but you've got to get all the landowners to sign an agreement to put that land in a game preserve until the deer and turkey are established."

He pulled a paper from the inside of his jacket and slid it across the top of my desk.

"They've agreed to do that," he said.

I read the agreement. It was crudely worded, but binding. The landowners had pledged to allow no hunting of any kind for five years, to help keep out forest fires, to help control predators and to give the Game and Fish Commission and the club full jurisdiction.

"You've got to have a map," I said,

state lands, or lands we had leased from the federal government. We had no money to purchase deer for private lands, even those under cooperative agreement with the state.

"We sorter figured on that," Corley said, "so we went around the county and got up some money. We've put \$1,000 in the bank for deer and \$300 for wild turkeys. We want to know where we can buy them."

I was so amazed that I did not answer. Corley went on.

"We know you can't assign no special ranger up there either, so we got it figured out that maybe you'll make about five of the landowners deputy game wardens without pay, and they'll keep the hunters off 'til the game gits a start."

Several days later I found some deer for sale in a neighboring state, so I



With money contributed by the citizens of Paulding County, twenty-five deer were purchased and released on the 192,000-acre preserve

"showing ownership, roads, streams and cultivated land."

"The county agent told us that," Frank replied, "and he helped us git it up. Jim, go down in the truck and bring that map up here."

We spread the map out on a table. It was neatly drawn; and, from what I know of that country, accurate.

"You expect us to put in deer?" I asked.

"We'd like to git some help," Corley said.

I explained that the state was buying a few deer with Pittman-Robertson funds, but that these had to go on

passed the information along to Corley. The next day he was in my office.

"We're going after them now," he said. "I jest dropped by to see how much we oughter pay."

They purchased 25 deer with the \$1,000 and released them on the tract. They bought 100 wild turkey eggs from an eastern game farm, hatched them in an incubator, raised them under the supervision of domestic turkey hens, and watched the poults go wild in the woods. But they did not stop there. The club put on a predator control project, trapped out the wildcats, drastically re-

duced the numbers of skunks, foxes and opossums. That was a big job on 300 square miles.

"Them varmints," Corley confided to me, "jest ain't goin' to eat up my fawns and break up my turkey sets."

One day in late spring, after all the game planting had been made, Frank Corley and his committee called on me again.

"We would like to know where we can git some trout for them streams that come down out of the hills," he said.

"We have some rainbow fingerlings in our Summer-ville hatchery, 80 miles north of you," I replied. "But they won't live in those waters. They're mountain trout and your streams are too warm."

Frank searched with bludgeon fingers in his pockets and found a slip of paper.

"Here are the temperatures of three creeks every week last summer," he said.

I looked over the list. Not a single reading went over 75 degrees.

"Are these accurate?" I asked.

"The county agent helped us," he said.

We gave the Paulding Club 20,000 rainbow trout for experimental purposes and Frank hauled them on the hottest day of a Georgia June last year and lost only one fish. He planted those rainbows in the coldest waters running out of the foothills—clear mountain streams with rills and eddies and blue pools.

I was thinking of that rainbow stock as we walked along the obscure trail on this winter day. Corley had stopped beside a pool and was watching my face.

"You've been wondering about those trout," he accused me. "Look here."

He pried a stick out of the leaves, stepped on a rock, and leaned out over the pool. He poked gently under a boulder. That trout left the impression of a gray arc between the boulder and the deep, clear water of the pool. He looked about 16 inches long.

Frank grinned at my exclamation. "We got lots of them that big."

And I had made the statement that trout would never mature in those waters, which were too warm!

The trail led on down the creek, turned abruptly left into a big cove that was for all the world like a hundred mountain coves I knew in the Blue Ridge. We moved cautiously now, stop-

ping every few steps to listen and to watch closely under the shadowed trees.

"They stay here," Frank whispered once.

Just under the crest of the hill, the woodsman seized my arm. Even under the thick mackinaw, my muscles yelled in protest.

"Look!" he whispered hoarsely. "Look!"

My eyes followed the compass course of his exclamation. I saw 23 alerted necks and heads, 23 coats of iridescent

sift in through the barren branches of the trees.

"You tried to catch me not long ago," Corley said, "but it didn't work."

I laughed through half-frozen lips. I had taken a ranger out of uniform and sent him across one of the preserve roads with a gun showing through the back glass of his automobile. He had been stopped four times by the deputies, who asked where he was going and what his business was.

That was before the state had purchased 20 more deer and released them in this central Georgia game preserve to help build the stock already there. Frank Corley rode on a truck to one of the Lake States for those deer. It was the first time he had ever been out of north Georgia. He saw many strange sights, snowdrifts six feet deep, lakes frozen over solid, cities he could not even imagine. What impressed him most was the size of the cornfields in the Middle West.

"Was that buck," I asked, as we walked through the deepening twilight, "that made the big track, one of yours or mine?"

The trail had widened now that we were back in the valley, and Frank slowed his steps so I could walk beside him.

"I've meant to tell you about that buck," he said. "We know him as the Christmas buck because he was brought in here at Christmas time. He'd been raised in somebody's back yard and was too gentle. We've had lots of trouble with him, slipping up behind people and ripping out the seats of their britches with his horns. He butted one fellow down a road embankment."

Corley's eyes crinkled at the thought. "We had a meeting of our club to see if we shouldn't eliminate that special deer before he hurt somebody."

"What'd they do?" I asked.

"The club voted," Frank said, "that didn't nobody but deer have no business in this refuge nohow, and if a man got hurt it was his own fault. He should've stayed out."

We climbed a little rise and came back to the dirt road where I had left my car. A bright afterglow had sparked the western ridge and shed a soft light over this wilderness, which was being peopled by the same creatures that

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AMERICAN FORESTRY CONGRESS

Endorsed by the Secretary of Agriculture

Secretary of Agriculture Clinton P. Anderson on October 19 endorsed the action of the Board of Directors of The American Forestry Association in calling an American Forestry Congress in 1946 to formulate a postwar conservation program. The Congress will be held in September at Washington, in cooperation with national and state forest agencies and the forest industries, upon completion of the Association's Forest Resource Appraisal.

In a letter to W. S. Rosecrans, president of the Association, the Secretary said:

"I need not elaborate on our own conviction that prompt, comprehensive and aggressive action is needed to build up and maintain the productivity of our forests at a level consistent with future requirements and with maintaining full employment. I am also visualizing, in addition to timber, watershed protection and other benefits and services of forests. To effectuate such a program will require the combined support of public agencies and private groups interested in conservation, and of the public in general.

"I assume that you have in mind a broad representation in your conference, including, for example, water users, organized forest labor, and forest recreation, as well as the public, professional and industrial groups. With this understanding of your plan, I shall be glad to arrange for participation by this Department, including, of course, the Forest Service.

"I think your conference should be a very worthwhile undertaking."

bronze and brown tail tips that mark the true wild turkey. A big gobbler began to walk away. The others followed. Then he began to run, with long strides and the whole flock went into the air at an angle of 45 degrees, like a covey of startled quail.

The light on Frank Corley's face would have been remuneration enough for a lifetime devoted to game conservation. His heart said, rather than his lips, "Ain't that a beautiful sight."

We turned and went back to the creek trail. Night was not too far away on this short December day. The wind had died from a shout to a murmur, and soft white flakes were beginning to

THE DEBT OF CONSERVATION TO DR. JOHN C. MERRIAM

By NEWTON B. DRURY

Director, National Park Service

BEFORE me are two books written by Dr. John C. Merriam. One is *The Living Past*, published in 1930. The other is *The Garment of God*, issued in 1943, two years before his death (Dr. Merriam died October 30 at Berkeley, California—Editor). In the long list of his writings these to many might pass relatively unnoticed, but to conservationists they represent the fruition of his scientific thought and its application to human values in the appreciation of nature.

Both works sum up his philosophy as to conservation.

With the passing of this distinguished scientist, others will deal with his contributions in a number of important fields. It is my privilege to note the place he held in the conservation movement in America, particularly as to the saving of the redwoods and the interpretation of the national parks. In both these fields his knowledge, coupled with imagination, brought to many a clearer meaning of the causes for which they worked. To the end, as in his early years, Dr. Merriam was primarily a teacher.

"Thus working at the roaring loom of time, I weave God's living Garment."

This passage from Goethe inspired the title to his book of 1943. In this work he emphasized the thought, natural to him as a geologist and paleontologist, that "mankind of today does not live in an isolated present separated from the past and future," and it was this concept of time that guided his thinking and action when dealing with nature.

In *The Living Past*, he wrote:

"Today we begin to see through all nature the movement of great forces involved in the process of creation. As this panorama opens we glory in our growing power of comprehension. Then on a rare occasion, in an unexpected region, there appears a new expression of reality far transcending that built upon previous experience and imagination.

"This flash of understanding, with widening horizon, can come to each individual as veritable revelation. It may bring realization of unmeasured power bound in the atom, another universe beyond the stars, a new vista in the past,

or an explanation of some baffling phase in human life."

Here, as elsewhere, Dr. Merriam thought in terms of the meaning to human beings of the great phenomena of nature. Nowhere was this feeling stronger with him than when contemplating the majestic forests of coast redwoods, the *Sequoia sempervirens*. They were to him a "living link in history."

"The mysterious influence of these groves arises not alone from magnitude,



Dr. John C. Merriam

or from beauty of light filling deep spaces. It is as if in these trees the flow of years were held in eddies, and one could see together past and present. The element of time pervades the forest with an influence more subtle than light, but that to the mind is not less real."

This, again, is from *The Living Past*.

Undoubtedly, no work in which Dr. Merriam engaged shows better his idealism than the conservation program of the Save-the-Redwoods League. And none by the accumulated results of over 20 years more fully proves that, when sustained by courage and clear thinking, idealism brings results. When in 1917

he made his now historic trip with Madison Grant and Henry Fairfield Osborn over country roads that have become the celebrated Redwood Highway, not one stick of timber in that region, comprising what many consider the finest forests of the world, was publicly owned. All was in the hands of lumbering operators, and was rapidly being destroyed.

While much remains to be done in rounding out the program for saving the redwoods, the vision of these men today has become a reality on a much larger scale than at that time they could have dreamed. Bull Creek Flat, the Avenue of the Giants, Prairie Creek and Mill Creek Redwoods and other state-owned groves in California stand preserved in all their majesty.

Under the leadership of Dr. Merriam, twenty-four years president of the League, there developed, after long study of the redwood region, a definite program embracing these outstanding areas as typical of the redwoods at their best.

Among his contributions was the establishment of a genuine and abiding enthusiasm for this movement among many associates—men of large business affairs, educators, scientists, foresters, landscape architects, public administrators, writers, artists, civic-minded women—an assemblage whom he once described as the outstanding group devoted to conservation in America.

A scientist by training, he knew the importance of learning all the available facts before determining upon a course of action. As a teacher who had expounded to large classes a subject sometimes looked upon as abstruse, he realized the need of clear statement in terms of human values. As an administrator he understood the importance of bringing into coordinated action the efforts of many representing diverse points of view.

His idealism; his ability to state a lofty purpose clearly and well; his insistence upon striving for a goal of such magnitude as to grip the imagination; his broad view of all interests involved; his unwillingness to compromise for

(Turn to page 621)

FORESTRY AT THE CROSSROADS IN NORTH CAROLINA

By
CHARLES R. ROSS and
GEORGE K. SLOCUM

FORESTS of the Old North State claim a number of interesting and unusual characteristics. They have earned the designation "Old Reliable" by steady outpouring of timber products for 200 years. Further, this state which advertises itself as "Variety Vacationland" has an almost unbelievable variety in its trees. From the mystery-shrouded coastal isles where white men hewed out their first settlement in America, to the blue domes of the Great Smoky Mountains, last eastern wilderness, the traveler may see in cross-section nearly all of the forest associations on this side of the continent. He can begin with cypress and gum swamps and end with spruce and balsam. It is said that in one county of western North Carolina more tree species are found than in all of Europe, or in all western United States.

If, in this preview of Forest Resource Appraisal findings, attention is focused on an entirely different aspect of these forests, it should not detract from such outstanding features. Their unique variety is related to climate and topography and should persist. Apparently, too, the state can continue to yield such quantities of wood as in past years, even without notable improvement of protection and harvesting practices long in use.

For 25 years, however, some eyes have been fixed on the goal of increasing forest yields. Through intensive



This article previews the findings in North Carolina of the Forest Resource Appraisal of The American Forestry Association. Other states will be similarly presented in forthcoming issues.

and long-continued research, instruction and services to farmers, the tobacco and cotton fields intermingled with these same woodlands have had their yields almost doubled. But comparable progress in forestry is not evident. Rather, North Carolina forestry seems to have arrived only at the crossroads, and asks where does it go from there.

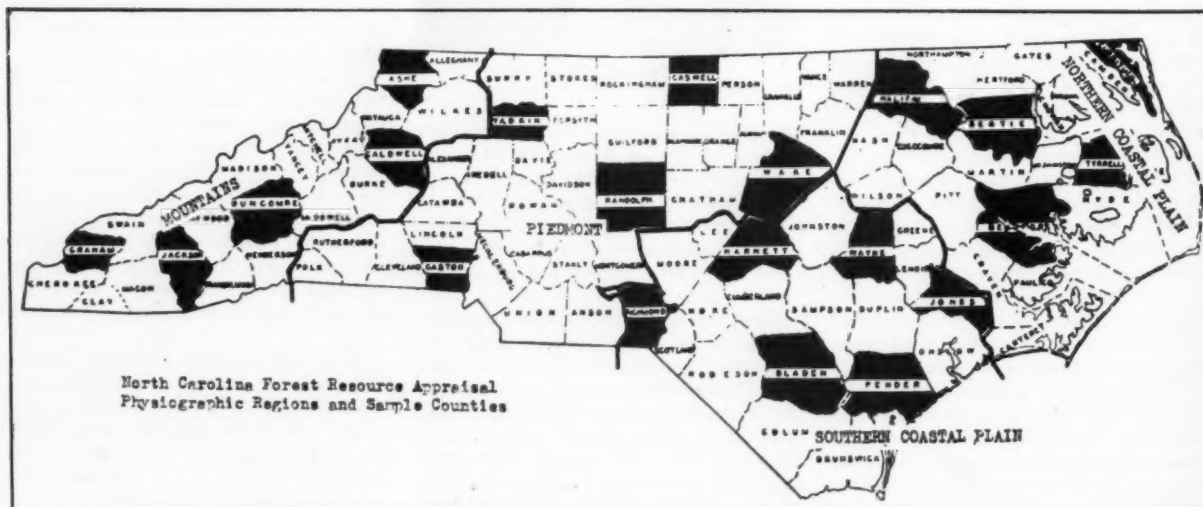
Main questions posed are these: Should there be an all-out effort to maintain pine, or should foresters acquiesce with nature's will to substitute hardwoods, and work with these? Are swamp and wilderness blocks in the east coast section to be allowed to burn over as in the past? Or will the state do something about the long undermanned protection forces in this area? Should the public take steps to halt the stripping

of pine seed sources? Can research and industrial ingenuity do nothing about the old, old problem of low grade and cull hardwoods, which burden forestry like a millstone in many areas? As such decisions are made, how can they promptly be converted into action upon a significant scale?

North Carolinians have a reputation for tackling problems once they are convinced about what ought to be done. The Carolina landscape may be sun-soaked, but it is not a languorous place of *mañana*. Among rural people in surrounding states it used to be said that one could tell a person from North Carolina "because he always leaves the door open". In the past 40 years the state has literally flung open its doors to modern ideas and action. Noting its tenfold advances in education, industry and transportation, eastern writers of 15 years ago (perhaps with more provincialism than delicacy) began to refer to this state as a "New England stray".

This commonwealth is normally about tenth among the states in manufacturing; sometimes it is second in federal taxes paid. Textiles lead with over 600 mills. Tobacco products run a close second, while wooden furniture is third. All three industries are concentrated in the Piedmont, or west middle section.

Agriculture, in view of much mediocre soil, uncertain markets for cash crops and a heavy population on farms, has also made creditable advances. To-



North Carolina Forest Resource Appraisal
Physiographic Regions and Sample Counties

acco money causes most of the jingle in the farmer's pocket. Some sections have good diversification, however, and there is a healthy trend to livestock. While North Carolina has the second largest farm population among all the states, only a third of its land area is being farmed. Cycles of land clearing and abandonment leave the proportion of land in crops and pastures about the same; possibly it is diminishing slightly in the western half of the state.

Having for decades (with sister state South Carolina) led the nation in the baby crop, North Carolina boasts a fairly large and growing population of more than three and a half million. Yet its steady population increase has failed to produce more than one 100,000-class city. It has brought about scores of thriving towns of from 5,000 to 20,000 people and a few considerably larger,



Frequent burning of grass has killed hardwood sprouts. Pine will seed abundantly here and, being more fire resistant, some will survive



Here, in Wayne County, repeated fires kept down hardwood reproduction. Then for a few years fires were stopped. Result—pine regeneration

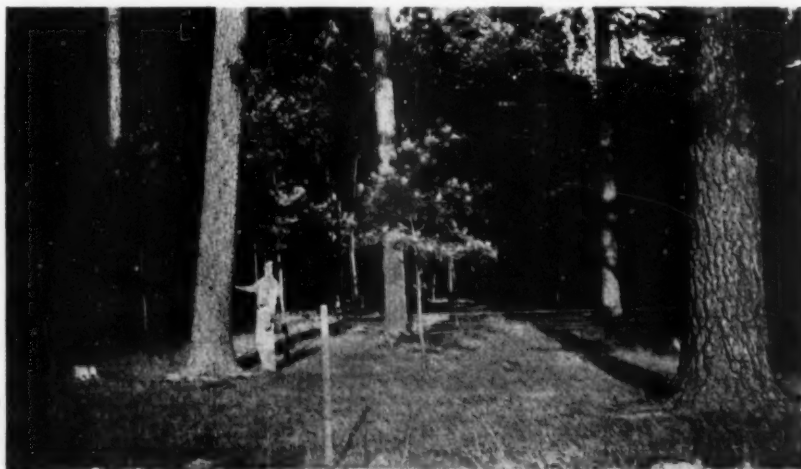
mostly in the industrial belt of the Piedmont. Slightly over half of the population is engaged in non-farm occupations of the cities and towns.

Physiographically, North Carolina is a typical southern seaboard state; it divides into natural regions easily remembered by geography students. Beginning at the Atlantic shore, three broad land levels succeed each other like steps. The coastal plain, as its name implies, is a flat area that changes to low hills about 100 miles back from the coast. Swamps of all sizes up to half a county characterize the poorly drained tide-water section, and stretch far inland along sluggish water courses. Loblolly pine grows almost everywhere, sometimes in pure stands but usually in mixture with red gum, oaks and other hardwoods. Flooded lowlands, however, may be all hardwoods and cypress, with

tupelo and red gum predominating. Peculiar half-dry, spongy swamps known as pocosins and bays usually contain the underrated pond pine. The coastal plain is 64 percent forested.

The Piedmont plateau, beginning about the middle of the state, is an upland section of endless small valleys and rolling hills. Shortleaf pine accounts for over one-third of the timber, with considerable loblolly on the low east side, and Virginia pine on the high northwest side next to the mountains. Oaks dominate among the hardwoods, which are usually in mixture with pine. This region has half the population, most of the industry, and is thickly occupied by small farms. Yet it is 48 percent forested.

The mountain region, backboned by the famous Blue Ridge and Smoky Mountain parallel chains, with rugged



Cattle have grazed in this forest, removing every hardwood sprig. Only the unpalatable pine is able to survive in the openings.

cross ranges between, is 70 percent forested. Pure hardwood forests predominate. There is quite a bit of shortleaf pine, and some Virginia and white pines. A century ago the higher mountain tops bore stands of spruce and balsam fir, of which only remnants persist.

Pine growth is more rapid in the eastern half of the state due to presence of the loblolly, which attains superb height and forms on rich tidewater sites. Hardwoods will grow well in all sections on suitable sites, but oaks of the mountains and upper Piedmont are far superior to those of the coastal plain for sawtimber.

Originally, North Carolina was almost entirely forest covered. Sawing of lumber was a common business among the early colonists. Naval stores from longleaf pine became so important a century ago that North Carolinians gained the nickname "Tar Heels"—which has

stuck to them ever since, although turpentining ended decades ago. "Big time" logging began about 70 years ago, first in coastal longleaf and later in loblolly and shortleaf stands. These big lumber mills skipped the Piedmont where early agriculturists had "log-rolled" most of the virgin timber, but they found sustenance in great boundaries of mountain hardwoods.

The first-named writer remembers vividly the shrilling and creaking log trains bringing out big timber in the North Carolina mountain county where he lived. Now the big mills with their logging railroads are gone from both mountain and coastal sections. He also remembers as a small boy the horse-drawn mill that sawed for months next to his grandfather's farm in the middle Piedmont. Such small portable mills have not gone; there are 3,000 of them today, sawing about three-fourths of the

lumber produced in this state. Semi-permanent or permanent larger mills, mostly in the coastal plain, saw the rest.

Except for a brief high period around 1910, and a low period in the early thirties, lumber production in North Carolina has been sustained at a remarkably uniform level near one and a quarter billion board feet annually. As the old growth was cut in the coastal plain and in the mountains, new pine forests upon abandoned cottonfields in the Piedmont began to fill the gap. Very little of the timber now cut comes from old growth stands.

The U. S. Forest Survey reports that for the period 1937 through 1943, the average annual commodity drain on sawtimber trees has been 2.4 billion board feet. Lumber accounted for about one and a half billion during that period. Disturbingly, one-half billion feet of sawlog stock was chopped into fuelwood. Veneers, an important industry in connection with North Carolina's great furniture enterprises, required over 150 million. Pulp industries used almost as much, followed by small quantities for hewn ties, poles, and miscellaneous uses. In the three war years of the above period, sawtimber drain was reported 15 percent greater than in the four previous years. Total drain in cords was 12 percent greater.

Re-manufacturing of a relatively small portion of its lumber output pays North Carolina handsome dividends, not only in such well known furniture centers as High Point and Lenoir, but also in numerous small wood-working and cabinet shops scattered over the west Piedmont and mountain countryside. Starting 50 years ago, the state has climbed to leadership in the manufacture of wooden household furniture. Furniture production is said to equal in value all products of the primary forest industries—3,000 sawmills, four pulp mills, 57 veneer plants, and many others. Naturally, with multitudinous and exacting wood requirements, furniture manufacturers buy lumber and veneers from many states and foreign countries; nevertheless, they also draw heavily on nearby Piedmont and mountain hardwoods.

The writers found ground being broken for three new furniture plants in one sample county. In certain areas industries making chairs, tables and so on are a boon to timber growers, paying good prices for the better hardwood timber. Record was made of a 300-acre tract of oaks that had sold for \$27,000, a mighty good price for second growth Piedmont hardwoods. Unfortunately, because of low quality and unwanted kinds, much upland hardwood is unattractive to such buyers.

The Forest Resource Appraisal esti-



When all seed trees have been cut the land stands idle. This striking example is in Pender County



Pine timber such as that which made North Carolina's reputation in the early lumber markets has been crowded out

mates the total sawtimber stand to be seven and a half percent below what it was seven and a half years ago, as reported by the U. S. Forest Survey. This comparison is restricted to findings of both surveys in 21 sample counties (see map on page 598), but a comparison involving Forest Survey data for all counties discloses only a negligible variation.

Pine sawtimber is estimated to be 12 percent lower, while hardwoods are almost the same as in 1938. Pine decrease was heaviest in the Piedmont, but some decline is indicated for all regions. Drops of from six to eleven percent in total sawtimber are indicated for all but the mountain region, which held its own.

Actually, the present stand of sawtimber is estimated to exceed 41 billion feet, as follows:

Region	Commercial Forest (Acres)	Pine (M board feet)	Hardwood (International 1/4" Rule)	Total
North Coastal Plain.....	4,140,752	8,704,000	5,445,000	14,149,000
South Coastal Plain.....	5,607,185	7,548,000	2,580,000	10,128,000
Piedmont	5,039,742	6,466,000	3,563,000	10,029,000
Mountain	3,748,679	2,527,000	4,288,000	6,815,000
Total	18,536,358	25,245,000	15,876,000	41,121,000

The volume of sound trees below sawlog size has increased, according to Appraisal sampling in 21 counties. The gain is nearly eight percent as compared to the inventory of seven and a half years ago. Figures based on five counties show a surprising increase of under-sawlog-size in the Piedmont, where all foresters agree that pine is rapidly being replaced by hardwoods. They are correct; the gain is only a flash in the pan, so to speak. Most of these cordwood-size pines were tallied in old field stands not yet up to cutting size.

Soil conservation practices are slowing down the cycle of land clearing and abandonment which produced highly productive old-field pine stands—in fact, most of the Piedmont pine. It is believed that the situation in Randolph County reveals the lengthened shadow of events marching in the Piedmont, and eventually in other pine areas, under present trends. Randolph is a big county. The U. S. Forest Survey in 1937 had four cruise lines across it, so they undoubtedly obtained a good sample of its rather uniform forests. They found 60 percent pine and 40 percent hardwood sawtimber. The American Forestry Association cruise in 1945 found the proportions reversed—60 percent hardwood and 40 percent pine. The total amount of sawtimber was at the same level. Heavy cutting of pine hastens the trend to hardwoods, but hardwood succession is written in the

laws of nature. It would eventually prevail anyway, reclaiming for hardwoods their former domain usurped by winged pine seed when man abandoned the fields he had cleared.

Nature is believed to desire to grow hardwoods all over North Carolina, though she moves more rapidly on Piedmont clays than on coastal sands. And some foresters suggest that in view of such natural conditions it is well to grow hardwoods. Research-proved answers to the comparative volumes and values of hardwood and pine yields are not available. Yet informed opinion agrees that pine stands will produce two to three times the volume of sawtimber and nearly twice the volume of bole cordwood in the same period of time on four-fifths of the land in the Piedmont and two-thirds of the land in the coastal

plain. Putting it another way, these "pine lands," growing good pine, will support two to three times as much lumber industry volume and twice as much bulk-wood industry as they would producing the slower growing, short-boled, more defective hardwoods that might occupy these drier sites.

Board for board, hardwood usually equals or surpasses pine in value. Yet far more pine boards are required to satisfy the nation's markets. Coastal lowlands, Piedmont creek bottoms and lower slopes, and most of the mountains are considered natural hardwood sites. They can supply the good hardwoods needed by local industry.

Chiefly because of farm field abandonment, pine is still well represented in the cordwood-size class. A study was made of reproduction-size class stems, counting only the types of seedlings and saplings that will make sawtimber later. The following table is highly significant, representing the facts from 1,150 plots mechanically scattered over 21 counties.

Comparison of Pine and Hardwood Percentage of Stems			
	Number of 6" and 8" Trees Pine (Percent)	Number of Trees under 5" Pine (Percent)	Hardwood (Percent)
North Coastal Plain	51	22	78
South Coastal Plain	71	49	51
Piedmont	68	28	72
Mountains	23	13	87

Under certain circumstances, nature helps pine to persist. Says the authoritative ecologist and author at North Carolina State College, Dr. B. W. Wells, "So universal is fire (in the southeastern coastal plain) that mature climatic communities are unknown. All evidence indicates that the extensive pine forests are fire sub-climaxes." What the learned doctor is saying is that, in the low-lying counties pine has been maintained by woods fires which kill the more delicate hardwoods but usually spare the larger pines. This suggests that fire may be used as a silvicultural tool.

So, although a trend to hardwoods is unmistakable in the Tar Heel State, land abandonment and fire are locally aiding in the retention of pine. Space does not permit discussion of other means which might be used. Duke University Forest School has long been aware of the fundamental importance of the problem. The Appalachian Forest Experiment Station is intensifying its work in this field. Research, however, has no established procedures to offer as yet. Nor is any simple answer to be expected. Where seed sources are adequate, grazing of cattle usually maintains pine. Similarly, the tobacco farmers' small patch cuttings almost always fill in with it. Use of the bush-ax helps when there are pine seedlings underneath. Greatly expanded research is needed, now; also trials of various methods by big landowning industries which have the management, men and machinery to control and use fire as a silvicultural tool.

It is questionable whether the selective cutting taught by many foresters, regulated cutting asked by the federal Forest Service, or the clear-cutting practiced by most timber outfits, will of themselves result in maintaining pine. Regulation as a stop-loss measure, to arrest devastation and preserve pine seed sources, has many proponents. Perhaps a pine seed tree law would suffice. It is believed worthy of serious study.

Evidence from literally hundreds of sources indicates that timber growing in North Carolina can be materially aided by a stepping up of assistance to landowners, on the ground. According to Tennessee Valley Authority officials, forestry education of this sort has not yet been given a fair trial. There are area

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UTAH JUNIPER

(*Juniperus utahensis* (Engelm.) Lemm.

BY WARREN D. BRUSH

UTAH, or desert, juniper is the most abundant and widely distributed tree of the Great Basin. Its range extends from southeastern Idaho south through most of Utah, southwestern Wyoming and western Colorado, west through northern Arizona and southern Nevada to the foothills of the Sierra Nevada in California, northwest along these mountains to Lake Tahoe, Nevada, and thence northeast through northeastern Nevada.

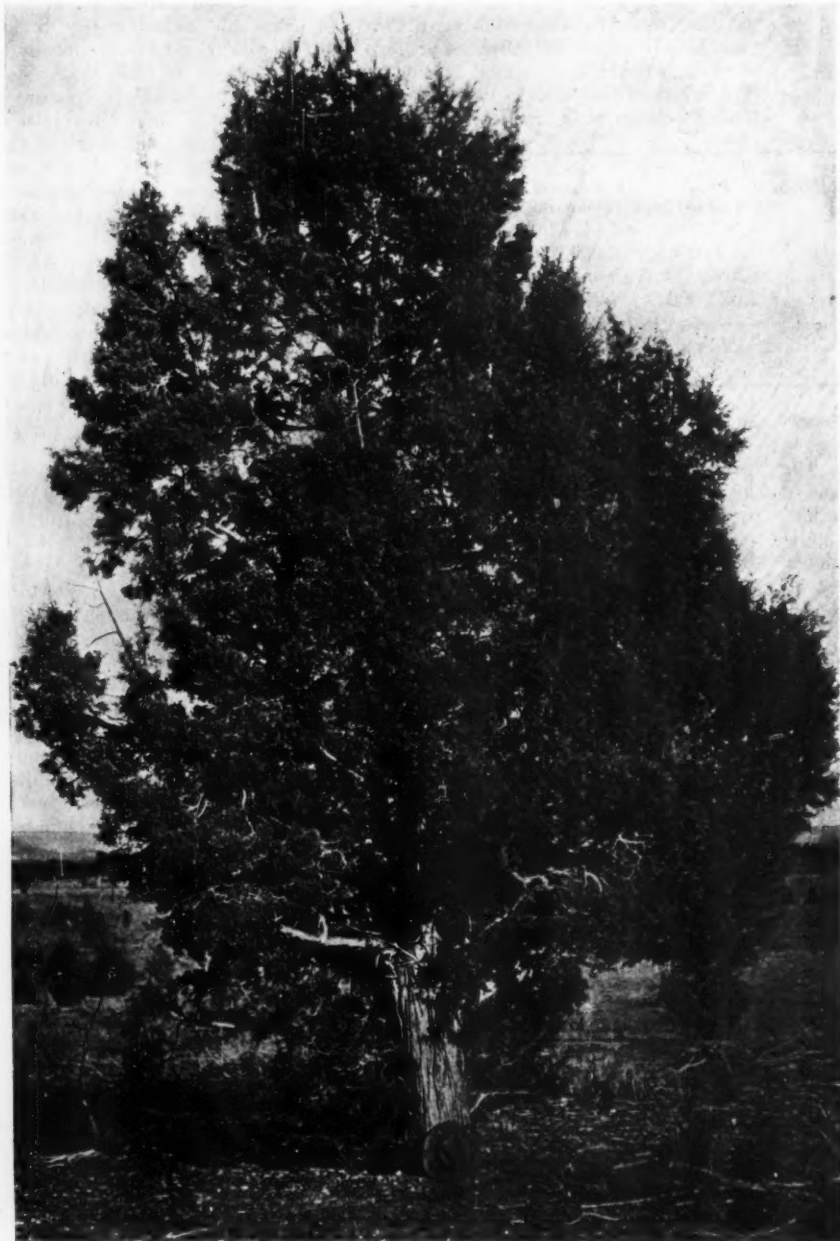
Growing extensively on sites which might otherwise be devoid of tree growth, it is found in dry, rocky, gravelly and sandy soils, on desert foothills and mountain slopes, generally from 5,000 to 8,000 feet above sea level. It occurs in rather open and scattered pure stands or mixed with single-leaf piñon and desert shrubs.

Commonly a low, short-trunked tree, it often assumes a bushy, many-stemmed form with a wide, rounded, rather

open crown of numerous upright, crumpled limbs. The largest specimens attain heights of 20 feet and diameters of 12 inches, but they are usually from 6 to 12 feet high and from 4 to 8 inches through near the ground. Growth is very slow and trees from 6 to 10 inches in diameter are from 145 to 250 years old. The trunk is apt to be one-sided with conspicuous folds and ridges and is covered with an ashy-gray or grayish-white bark, which is divided into long, thin, persistent, fibrous scales. The slender, stiff-looking yellow-green branchlets are covered with a thin, light red-brown scaly bark.

The minute, sharp, scale-like, pale yellowish-green leaves, about one-eighth of an inch long, are mostly in alternately opposite pairs, and closely overlap each other in four rows; sometimes they are arranged in six rows with three leaves at a joint. Leaves of leading shoots are much larger and keenly pointed, while those of seedlings are needle-like. With the aid of a hand lens, minute teeth may be seen on the leaf margins. The leaves of each season's growth persist for 10 to 12 years or more. As in other junipers, the foliage, when crushed, gives off a pungently aromatic odor.

A short-trunked tree, Utah Juniper often assumes a bushy, many-stemmed form with a wide, rounded, rather open crown of numerous upright, crumpled limbs. Large specimens attain heights of around twenty feet.





Pale yellowish-green needles, an eighth of an inch long, are sharp and scale-like. The whitish berries mature in September

The flowers are minute and inconspicuous. As with junipers generally, the pollen-bearing male flowers are usually borne on different trees from those which bear the fruit-developing female flowers. Occasionally, however, male and female flowers are found on the same tree.

The ripe "berries," which mature in September of the second year, are about one-third of an inch long and are marked by the more or less prominent tips of the flower scales, which are, in fact, similar to the scales of woody cones, but which have become fleshy and have united to form the berry-like fruit. Containing one or, rarely, two, seeds, the berries are covered with a whitish bloom which, when rubbed off, exposes a smooth, red-brown, tough skin. The seeds are pointed at the top end, prominently and sharply angled, and marked nearly to the top by what appears to be scale-like basal covering (the seed scar), to which the thin, sweet pulp is attached.

The pulpy flesh of the berries is juicy or mealy, sweetish and strongly aromatic (due to the presence of resin cells). It is eaten by Indians, fresh, or ground and baked into cakes. Birds eat the fruit of junipers, but the hard, bony seeds are entirely unaffected by digestion, except that it is believed to facilitate, in some degree, their germination. Both birds and mammals play a most important part in the dissemination of these seeds. Without their aid, dissemination would be exceedingly slow on level ground, where the heavy berries lie as they fall beneath the mother tree. On slopes, however, they may be carried far by water washing the surface soil.

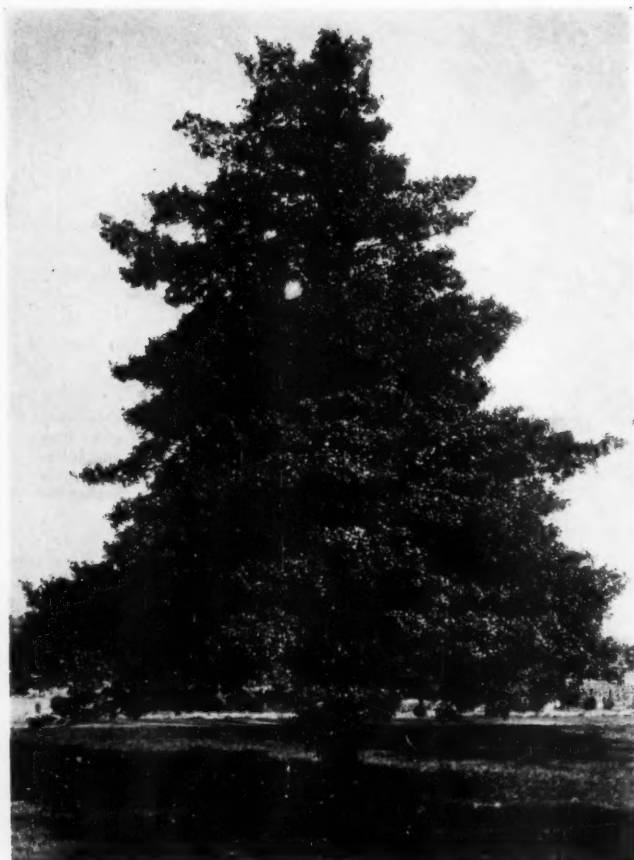
The light yellowish-brown heartwood has a less pungent odor than that of other junipers. The thick sapwood is nearly white. Although the heartwood is very durable, the tree is not adapted to commercial use because it is too small and ill-shaped to be converted into lumber. Wherever it is sufficiently abundant, however, it finds important domestic use for fuel and fence posts, because of the scarcity of other timber.



The heavily ridged ashy-gray bark is divided into long, thin, persistent fibrous scales



Natural range of the Utah Juniper



THE story of the butchery and ruthless mutilation each Christmas of one of America's most beautiful trees, our native holly, is neither pleasant to relate nor palatable to read. Yet it is a condition that must be faced.

Each year, from New Jersey southward along the eastern seaboard, dealers and fly-by-nighters scour the countryside and woodlands in search of this colorful Yuletide greenery. As early in the fall as possible, transactions are consummated between farmers or other woodland owners at specified prices. Often, however, payment is made on a percentage basis, the buyer guaranteeing to the seller a percentage of the profits he admits receiving. Needless to say, this payment sometimes represents a minor portion of the true income.

As early as Thanksgiving, these dealers enter the acquired tracts armed with axes, saws, hatchets, or corn knives. The heavily-berried branches are hacked off about eight inches from the trunk to afford the worker a convenient ladder by which to climb the tree to continue his cuttings. Frequently trees may be completely cut down; often tops are chopped out. Such heavily-butchered trees may not produce another holly crop for 20 years, and many trees fail to survive such drastic pruning.

Much fine holly grows in swampy, wooded areas where property lines are obviously ill-defined. Here, much holly is stolen. This is difficult to detect and prevent, for even if the culprit is caught red-handed, his excuse invariably is "I thought I was on so-and-so's property."

As a rule, the holly owner received little from his crop. In Maryland, the holly on areas from 50 to 500 acres has been bought for as little as \$5 to \$25. One instance is on record where a landowner, selling on the percentage basis, received 59

Maryland has outlawed the slashing corn knife in an effort to halt mutilation of its native holly

HELP FOR THE HOLLY

By HARRY WILLIAM DENGLER

cents for the top-grade holly cut from his 75-acre woodlot.

While the dealers are gathering holly, so, too, are many farm and woodland owners. This is sold either at the roadside, at nearby public markets, to local dealers, or to commission men in large cities. Estimates indicate that as many as 10,000 people in ten Maryland counties annually engage in harvesting and processing holly for the Christmas trade, earning nearly \$500,000 a year.

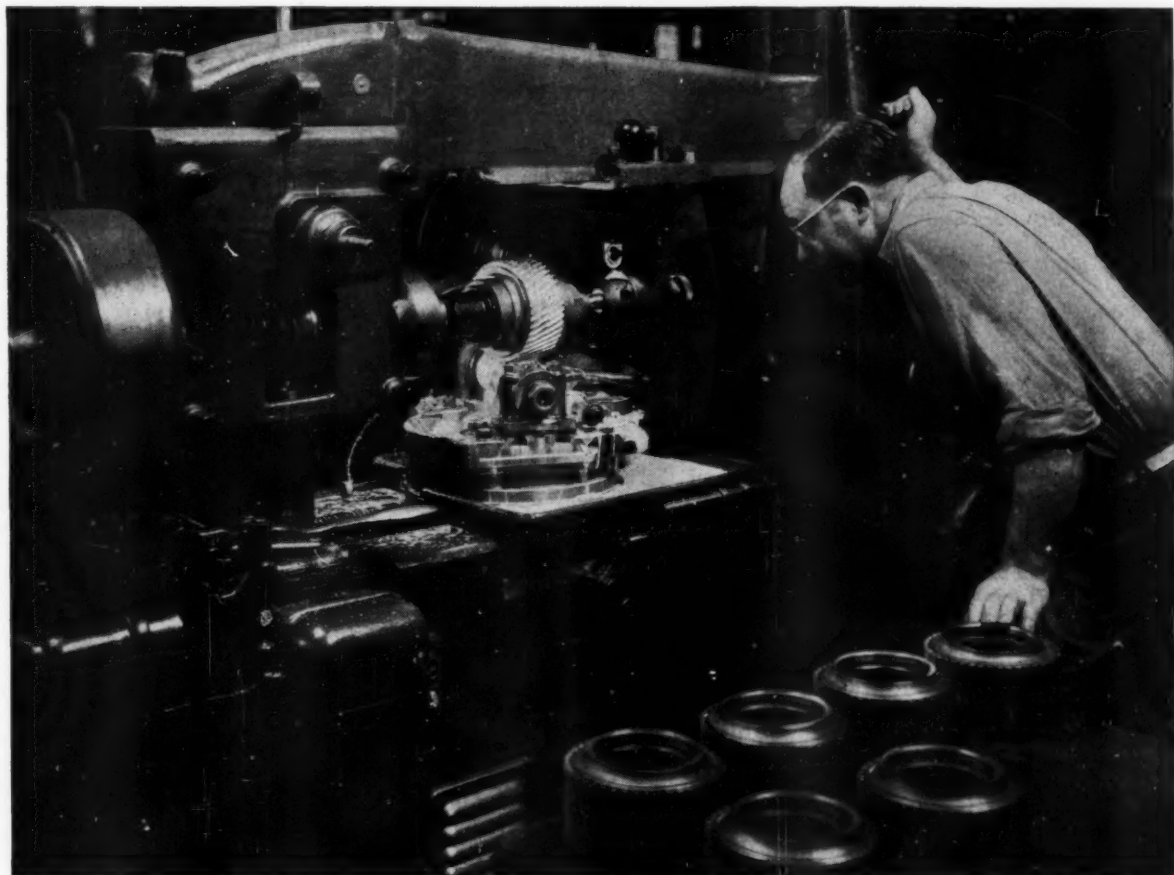
The initial steps to conserve native holly in Maryland were taken by the Garden Club Conservation Committee and former state forester F. W. Besley. Their efforts were responsible for the state's "Certified Holly" program (see AMERICAN FORESTS, December, 1941). In this, landowners cooperate with the Maryland Department of Forests and Parks in achieving proper holly growing, cutting and marketing methods.

Recently Maryland took additional steps to perpetuate its holly stands. Regulation 7 of the "Rules of Cutting Practices" established by the Commission of State Forests and Parks forbids the use of saws, hatchets and corn knives in holly stands. Other regulations state that when holly is harvested, only a proportion of the smaller branches may be removed with a pruning shear or lopper.

It is much too early to evaluate the results of this new

(Turn to page 617)





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LUMBER'S WAR RECORD

On October 9, J. A. Krug issued his final report as chairman of the War Production Board—"Production—Wartime Achievements and the Reconversion Outlook" (WPB Document No. 334). Included in this is a concise history of lumber in World War II, of such current interest that it is presented here in full.—Editor.

THE history of lumber during the war is the record of a transition from surplus to scarcity. At the start of the defense program we dealt prodigally with lumber. By 1944, the War Production Board had to devise a lumber budget and the necessary procedures to force the industrial economy to live within its lumber means.

From the start of the defense program through 1942, forest products were commonly regarded as a great reservoir which could be drawn upon almost at will and in any quantity to meet expanding requirements. When critical shortages developed in other materials—notably the metals—wood, in one form or another, was seized as a substitute. Wood boxes and paper were enlisted for agricultural packaging when the burlap supply from India was cut off; tight cooperage took the place of metal drums in many special uses; timber replaced steel in small, fast marine craft such as subchasers and torpedo boats; construction designs were changed to specify timbers rather than steel for the long beams and arches over plant floors, for bridge members, and for river barges and radio towers; experiments were made looking to the use of veneer and plywood in large quantities in place of the then-scarcer light metals in gliders and in trainers and transport planes.

The huge military construction program which began directly after Pearl Harbor was handled with comparative ease, feeding generously from the fat inventories (well over six months based on 1941 usage) held by the lumber industry when the deluge of orders descended. At the same time, many lines of civilian activity, such as furniture manufacture, which depended upon wood as their major fabricating material, were even permitted to expand.

The impression that lumber would continue to be available in any needed amount for any war purpose, and that it also could serve as a substitute for the more critical metals, was shared by the War Production Board and industry alike. Production had expanded from its peacetime level of 26 billion feet (the

1935-1939 average) to 36 billion feet annually in 1941 and 1942, a gain of around 40 percent. There were 17 billion feet in the hands of mills and yards at the time of Pearl Harbor. Although roughly six billion feet of this inventory was worked off in 1942 to carry the initial cantonment construction program along with virtually unrestricted civilian use of the same softwoods, few persons inside or outside the government were alarmed.

The year 1942 was well under way before the surface calm in the lumber situation was broken when procurement officers of the Army and Navy found that they could no longer depend upon delivery of lumber as needed. The War Production Board dealt with this difficulty in May by issuing Limitation Order L-121, the first major restriction placed directly on the use of lumber. This order gave blanket priority to the Army and Navy on the nation's production of softwood lumber of construction grade (normally three-fourths of total lumber production). The absence of any statement from the military or other agencies of their overall requirements made it impossible at that time to design a more comprehensive order or one less arbitrary in character.

With production staying at the peak of 36 billion feet annually, reached in 1941, and mill capacity known to be above 40 billion, realization that the basic lumber structure was weak and was soon to undergo rapid deterioration came slowly. The issuance in August of General Conservation Order M-208 to supersede L-121 did not reflect wide acceptance of the seriousness of the lumber problem so much as it recognized the inequities in the original limitation order. The new order set up a rating system for construction lumber by end uses and also embodied some conservation features.

Another source of difficulty—competitive bidding within the services—was resolved by the creation of the Central Procurement Agency, charged with responsibility for purchasing construction lumber for the Army, Navy, Maritime Commission, and (subsequently) ARCO. This resort to centralized buying by the military was a step which at that time had no precedent, and it had the effect of eliminating many artificial shortages.

The tough operating problems of the early war period were not general, but within individual species, grades and sizes. The most spectacular of these

special problems occurred in aircraft dimensional lumber. Full allocation of the available supply between the United States and the United Kingdom aircraft programs, supported by cutting directives on the mills, was instituted October 1, 1942. In the year that followed, United States production of these select grades had more than tripled. When requirements were scaled down at the time allocations were made for the fall and winter quarters of 1943-44, it was possible to balance supply and demand.

Even older than west coast aircraft lumber as a special problem, and the first lumber item to come under allocation, was balsa wood, the lightest known wood and one which is wholly imported (almost entirely from Ecuador). This species had been in heavy demand by the British for aircraft purposes before we entered the war. The United States needed balsa almost exclusively as a flotation material for life rafts, floats and life preservers. The British use was concentrated in the lightest grades—preferably under eight pounds per cubic foot—whereas our need was found to be met satisfactorily with the medium-weight grades. The greatest urgency was attached to maximizing production in Ecuador, and the combined chiefs of staff ruled that the United Kingdom was to have first priority on the lighter weight pieces, used as the core of the plywood fuselage of the Mosquito fighter-bomber.

In the final half of 1942, the Combined Raw Materials Board introduced allocations between the United States and the United Kingdom, and the FEA (then the Board of Economic Warfare) commenced the centralized buying of all balsa of aero and flotation grades produced in Ecuador. Production increased from its prewar level of only six million feet annually, when the chief outlet was toys and model planes for the United States market, to nearly 40 million feet in 1943.

Other problem woods which required special treatment in the first two years included mahogany (for torpedo boats and aircraft), birch and hard maple aircraft veneer and plywood (for which the British had a large use for propellers as well as air frames), and Douglas-fir clears and structural stress timbers required for aircraft, pontoons, ship-decking and planking. As in the case of balsa and of Sitka spruce aero lumber, the shortages which developed in

(Turn to page 619)

Increasing the forest yield without increasing the timber cut

Construction will soon be started on a waste liquor recovery plant for the present sulphite mill and a new sulphate mill of the Pulp Division of the Weyerhaeuser Timber Company. The addition of this new mill will nearly double the present annual production of pulp at Longview, Washington, without the cutting of any more timber. This new 70,000 ton bleached sulphate mill will derive its wood supply from small logs formerly left in the woods as unmarketable and also from waste wood of the saw mill, a good portion of which has been burned to generate power.

The waste liquor recovery plant for the present sulphite mill will make possible the recovery of most of the process chemicals and the organic material in the waste liquor. This organic material contains a large amount of stored up solar energy. This energy will now be recovered by burning the organic material much like fuel oil in specially designed furnaces for the generation of power sufficient to operate the mill. By this method that portion of the saw mill waste wood now being used for fuel for the pulp mill, will be made available for conversion into sulphate pulp.

The small logs formerly left in the woods will now be gathered up and be made into pulp by sending them through a hydraulic log barker designed to handle this type of material. Their removal from forest lands will increase pulp production and reduce the fire hazard in the woods. Construction of a new hydraulic log barker and whole log chipper for the existing 90,000 ton sulphite mill is nearing completion. The use of this equipment will reduce wood requirements 15%, yet sustain present pulp volume.

In addition to nearly doubling the pulp production from a given forest acreage, these new mill developments will also provide jobs for about 250 additional employees, whose wages will approximate \$800,000.00 per year.

WEYERHAEUSER



CHRISTMAS TREES FOR LIFE INSURANCE

By WILLIAM J. DUCHAINE

EIGHTEEN years ago, Willard C. Cribbs, of Ionia, Michigan, veteran county agricultural agent, underwent a serious operation. After his recovery, he decided to increase his life insurance holdings, and applied for additional policies. He found, however, that no company would accept him as a risk, so it was up to him to insure his own future, as well as that of his descendants, in some other way. So Cribbs embarked on his own insurance enterprise, with Christmas trees as his chief assets.

Cribbs had long preached and practiced reforestation. He is given the credit for the Michigan Highway Department's adoption of the "living snow fence" idea, which is now proving its worth in reducing snow removal costs and beautifying roadsides throughout the state. He started planting trees, on his farm near Mancelona in Antrim County in 1918. Now, at the age of 67, he is the retired county farm agent of Ionia County, with an 85-acre Christmas tree farm working for him—125 thousand trees, in all.

Twelve acres had been planted to red and white Norway pines as early as 21 years ago. Since Cribbs' rejection by the insurance companies, however, he has planted an average of 10,000 trees annually, with 90 percent success in his plantings.

In addition to Norway pines, Mr. Cribbs in recent years, has interplanted white and Norway spruce. As he explains it: "The spruce are for income in my day; the pines are to be harvested by my grandchildren."

For the spruce trees, which Mr. Cribbs prefers as Christmas decoratives, he receives from \$1 to \$2.50. And when he decided last year to use 500 Norway pines for the holiday trade—trees which were removed to make room for the growth of remaining ones—he found they retailed at \$1.50, netting him \$1.25. Although dealers were, at first, reluctant to use pines as Christmas trees, once

they were induced to try them, by the simple expedient of seeing a sample tree in its full Christmas dress, it was found that they were very popular. The buyers were especially pleased with them, because they retained their needles so

apart. The rows are about seven feet apart. He uses a furrow at least seven inches deep, and then sets the two or three-year-old seedlings in a hole dug in the bottom of the furrow, about five inches deep. All seedling roots are cut back to a length of five inches with a sharp knife before the bunches are untied.

He is very definite about the depth of the furrows. "Michigan State College and the Michigan Conservation Department recommend only three inches in furrows," Mr. Cribbs explains, "but I use seven or more inches. Then grass and weeds will not start in the furrows for at least two years to compete for moisture, nor will the wind harm the little trees. And the furrows will furnish some shade which is beneficial." He added, "It has been my experience that red pines need very little fertility."

Cribbs uses a small garden dibble to dig the hole. After the seedling is taken from the pail, in which the roots are in water all the time, it is placed in the hole. Then, the soil is replaced and the heel of the shoe is pressed on it to make it firm around the roots. Using this method, he once employed 13 boys to plant 18,000 red pine seedlings, and their job was completed in just nine hours.

At Michigan State College, extension leaders rate Cribbs as one of Michigan's supreme optimists. "No matter where you found Cribbs in agricultural extension work," said B. D. Kuhn, assistant state county agent leader, "he was living in the best town, the best county, the best state and the best nation in the world. The people he worked with were always the most capable and the most cooperative that could be found."

And Willard C. Cribbs has lost none of his optimism in the passing years. He goes on with his Christmas tree life insurance project, anticipating increased sales and a long, happy life in his "retirement."



The spruce trees on Mr. Cribbs' farm are for income in his day. Pines (above) are for his grandchildren

well. As a result, Mr. Cribbs has found there is now a preference for the pines, and he estimates he could remove half of a six-year-old stand of red pine—about 11,000 trees—from 22 acres this year, still leaving a fine forest.

However, the spruce trees interplanted in 30 acres of eleven, twelve and thirteen-year-old red pine, truly constitute his "insurance plot," for use in his own lifetime.

Mr. Cribbs plants spruce and red pine in the same row, about six feet

A Memorial Forest?



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Committees. . . Your copy will be reserved if you write at once.

The brochure is published by the Barre Granite Association, located in "The Granite Center of the World," Barre, Vermont. It is filled with designs of prize-winning caliber, among them the actual winners of a recent war memorial contest.

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memorial forest — an indestructible form for the listing of names, or for the inscription of sentiments or dedicatory phrases.

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AN ARTIST INTERPRETS THE FOREST

Through Wood Sculpture Peter Krasnow
Reveals Hidden Symbols in Tree Structure

By PHILIP L. SEMAN



"Silence"—black walnut sculpture, twenty-five inches high

POETS and musicians are not the only esthetes who have been inspired to creative heights by the wonders of the forest.

Some years ago a 12-year-old boy, Peter Krasnow, filled with an insatiable thirst for beauty, came to America. His purpose was to escape his prosaic and unsympathetic home in Russia's Ukraine and find an environment where he could satisfy his creative longings. Imbued with an inner vision, he dreamed of creating beauty from the material sources that surrounded him.

Without family, friends, or means he struggled years for an art education. He worked alternately day and night while he studied, first in Boston, then in Chicago. Finally, he became director of Art at the Jewish People's Institute of Chicago.

One day, yielding to an impulse to observe the wonders of nature, he began a leisurely journey from New York to

Los Angeles. For more than three months he traveled, absorbing the beauties of the forests and the mountains. He stored up impressions—a wealth of future inspiration. It was the trees, particularly, that had the greatest influence in making him the renowned artist that he is today—for he has exhibited in many famous museums.

Now, hoping to inspire others with sculptural talents, he has offered an explanation of a new development in wood sculpture. He stresses the difference between wood carving and wood sculpture. Decorative or elaborated designs, such as the sculpture of the Renaissance, he describes as being so much concerned with drapery and accessories that it suggests a pictorial rather than a sculptural quality.

Mr. Krasnow explains that the first step is a search for pure form in wood, a dominating element evident in all sculpture regardless of medium. The artist must aim at the attainment of pure plastic wood form treated sculpturally. He describes wood sculpture as a consistent building up of forms functioning for their own structural purposes and emphasizes that, for instance, one must not attempt to sculpture a woman in a Greek bathrobe out of a piece that contains form elements of another kind. As he expresses it: "That is out of keeping with the true nature of the material."

Mr. Krasnow feels that a block of wood, tree or branch, with their perfections or imperfections suggest but the vehicles or means and not the end. Some wood formations may suggest nothing at all to the artist when he examines them. Others, due to some peculiarity in their original growth, immediately point to possibility for form; even in a crude log one may often find a hint of

highly suggestive and significant form. The wood which in itself has some vital shape pertinent to the creation of form is of considerable value in helping the artist. Suspended or projected shapes offer a starting point and are a fortunate find.



"Wood Sculpture"—in walnut, seventy-two inches high

AMERICAN FORESTS

Working with wood is unlike clay, stone, bronze, or other medium. There are important basic differences. Because of the original structure of the material, the wood sculpture has to deal with grain and knot and tone in all their variations. The winds and rains and storms the tree experienced all confront him. He may come unexpectedly upon surprisingly beautiful grains, burls, or knots that must be considered for their own values, and which are apt to lead off to an unexpected slant in the composition. Most important, forms must be made to live and speak as such, separately and in their aggregate whole. Whether they resolve themselves into human shapes or indicate vaguely animal, plant, or sea life, they must have their being out of necessity to the work they compose. This attribute forms the distinguishing feature between an authentic work of art and a false counterpart.

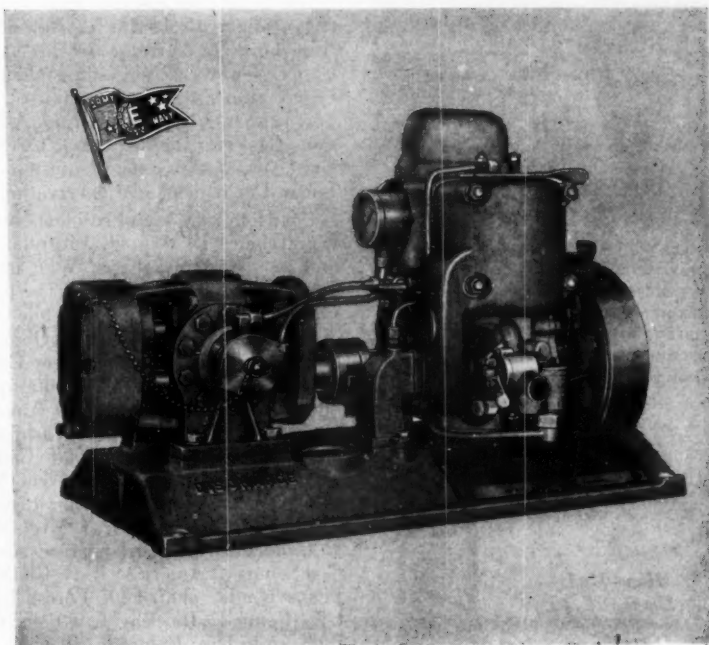
Mr. Krasnow, who has worked with many varieties of rare woods, gathered from all parts of the world, has been acclaimed as the man who has written symphonies with mallet and chisel—an artist who has expressed poetry in its highest sense. Some have called him a modern traditionalist. His latest creation is reminiscent of Rodin's last creation—"The Gates of Hell"—exhibited in Paris. It is a huge conception that he calls "Victory." It is a group piece created as a concept of man's hope for the future and is composed symbolically of a variation of wood families. Through Mr. Krasnow's vision and genius trees have been permitted to reveal their secrets to man and show in moving ways strange new kinships.

Philip W. Ayres Dies

Philip W. Ayres, who for 36 years directed the work of the Society for the Protection of New Hampshire Forests, and who served as a director of The American Forestry Association from 1908 to 1910, and more recently from 1936 to 1939, died in New York on November 3. He was 84 years old.

Although known nationally through his work for the Weeks Law, which created the first national forest in the East, Mr. Ayres was linked inseparably with New England, for he devoted most of his life to the development of forest and conservation interests there. He worked tirelessly to bring about the preservation and development of various state forest reservations, notably in New Hampshire. (A tribute to Mr. Ayres' achievements will appear in the January issue.—Ed.)

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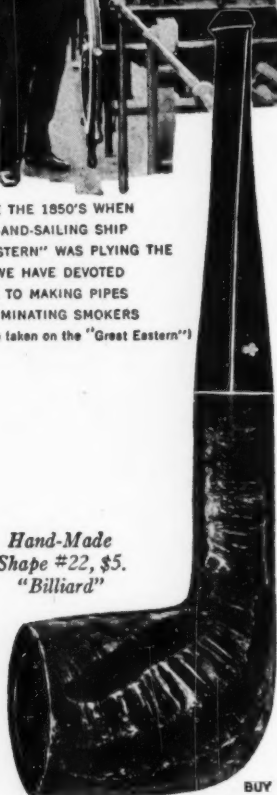
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THE NEWEST AND BEST
IN KAYWOODIE. LOOK FOR THE CLOVER LEAF



AFA Nominates Officers for 1946

THE Committee on Elections of The American Forestry Association has nominated the following slate of officers for the Association for 1946:

For President: W. S. Rosecrans of California, chairman, California State Board of Forestry.

Director for four years: James J. Storrow, Massachusetts, treasurer, Society for the Protection of New Hampshire Forests. Director for three years: G. F. Jewett, Washington, chairman, Forest Conservation Committee, National Lumber Manufacturers Association. Director for two years: C. P. Wilber, New Jersey, state forester, New Jersey Department of Conservation.

For Honorary Vice Presidents for one year: Henry H. Arnold, Virginia, General of the Army, U. S. War Department; Henry J. Brunnier, California, president, American Automobile Association; Dr. L. C. Chadwick, Ohio, secretary, National Shade Tree Conference; Paul Clement, Minnesota, president, Izaak Walton League of America; Dr. Wilson Compton, Washington, president, Washington State College; Mrs. John W. Donaldson, New York, chairman, Conservation Committee, The Garden Club of America; Miss Marie E. Gaudette, New York, nature adviser, Girl Scouts of America; P. H. Glatfelter, Pennsylvania, chairman, Forest Industries Council; Dr. Roy L. Green, Colorado, president, Colorado A. & M. Col-

lege; Walter W. Head, Missouri, president National Council Boy Scouts of America; Don P. Johnston, North Carolina, vice president, North Carolina Forestry Association; Judge Harley Langdale, Georgia, president, American Turpentine Farmers Association Cooperative; Duncan McDuffie, California, president, Save-the-Redwoods League; Earl McGowin, Alabama, Southern Pine Association; Benton MacKaye, Massachusetts, president, The Wilderness Society; Robert Moses, New York, chairman, New York State Council of Parks; J. J. Pelley, District of Columbia, president, Association of American Railroads; Mrs. Oscar Palmour, Georgia, conservation chairman, General Federation of Women's Clubs; Honorable Earl Snell, governor of Oregon; R. Worth Shumaker, Indiana, acting director, National Americanism Commission, American Legion; William B. Warner, New York, president, National Publishers Association, Inc.

For Treasurer: I. J. Roberts, District of Columbia, assistant vice president, Riggs National Bank.

Members of the Committee on Elections for 1946, selected from the membership of The American Forestry Association, were: David P. Godwin, chairman; O. A. Alderman and G. H. Collingwood.

The slate of nominees on the election ballot will be mailed all members of the Association in December.

State Foresters Indorse American Forestry Congress

AN American Forestry Congress, to be called in 1946 by The American Forestry Association to formulate a post-war conservation program (see November issue), was indorsed by the Association of State Foresters meeting in St. Louis on October 10.

Recognizing that new and up-to-date inventories of America's forest resources will be available next year and that proposals for legislative and other aids to nationwide forestry require revision in the light of changing conditions and new facts, the resolution "commends the proposal of The American Forestry Association to sponsor an American Forestry Congress at which all forest interests may unite in developing forestry programs to meet the nation's future needs based upon a common understanding of the nation's forest situation."

Other important resolutions favored federal aid to the states in such postwar forestry projects as may be necessary in public works or relief programs, and urged more aggressive leadership by state foresters in providing through cooperative technical guidance and assis-

tance good management of all privately owned forest land.

Of particular interest was the acceptance by the Association's Committee on Federal-State Cooperation of a six-point report drafted by the southern group of state foresters on ways and means to improve the cooperative relationship between the states and the U. S. Forest Service.

Pointing out that state foresters are held responsible to their own states for policy and planning in matters pertaining to state and private forest land, the report contended that this fact "has largely been ignored by the U. S. Forest Service in recent years." As a consequence "the southern group of state foresters has lost a measure of confidence in the integrity of top U. S. Forest Service men in Washington."

To improve the cooperative relationship between the states and the Forest Service, the report submitted the following suggestions:

1. "The chief of the Forest Service should establish an office of State Co-

operation under his direct supervision, parallel to, but having no connection with national forest administration.

2. "Personnel for this office should be comprised largely of foresters with records of broad experience and sympathetic attitudes toward, and, if possible, actual employment in state forestry work.

3. "All programs or policies dealing with state or private forest lands shall be developed in consultation with approval by the state foresters concerned before initiation.

4. "Policies to govern cooperative activities with the state foresters should be worked out between the chief of the Forest Service and the state foresters by groups if possible, but with individual state foresters if necessary.

5. "The chief of the Forest Service should provide the state foresters with budgets covering proposed federal expenditures and plans for work programs.

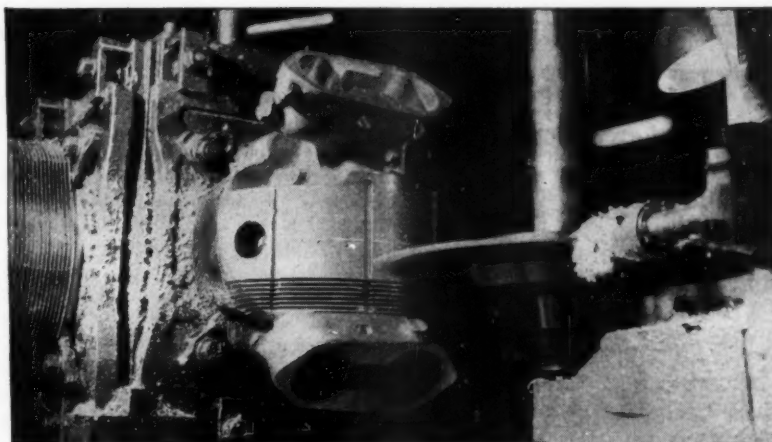
6. "Insofar as legislation will permit all regular and normal cooperative activities should follow the procedures established by the Clarke-McNary Act which provides for state expenditure of funds and federal reimbursement for same."

These suggestions, the report concluded, "if purposefully and conscientiously put into effect should lay a foundation for greater progress in the protection and improvement of the vast forest ownership for which the Clarke-McNary Act was intended, to provide cooperative funds and technical assistance and guidance for the state forest service and agencies."

In their resolution favoring federal aid to the states in postwar forestry projects, the state foresters made the following stipulations:

(1) That, if possible, federal aid be in the form of grants of money to be expended by the states; (2) that in each state the statutory state forestry agency be the authority to initiate and supervise all forestry projects for which federal aid is furnished for use on state or private land; (3) that there be no resumption of the Civilian Conservation Corps program as formerly constituted and (4) that if federal aid be furnished in the form of men and supplies, the following principles be observed:

"That there be no Army participation in the operation of work camps; that opportunities for the employment of local men living near work projects be provided; that workers should be paid the going rate of wages in the locality where they are employed, and should be required to work full time."



HOW A DISSTONEER SOLVED A TOUGH MILLING PROBLEM BY THE DEVELOPMENT OF A SPECIALLY DESIGNED SAW

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FACT-FINDING SURVEY WILL
DETERMINE WAR'S EFFECT ON
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TO PROVIDE A BASIS for informed postwar handling of one of the country's most important natural resources, The American Forestry Association is undertaking a fact-finding survey to determine what effect the war has had upon the country's forests and forest lands and what condition they are in now that the manifold problems of reconstruction are at hand.

The project is a broad cooperative undertaking in which all interested individuals and agencies are invited to join. Its overall objective is to have available down-to-the-minute facts as to the forest situation, upon which public and industrial policies of forest conservation, management and land economy can be based.

Public-spirited citizens, industrialists and organizations alert to the need of forest conservation and development in postwar economy have made the survey possible by underwriting well over ninety percent of its estimated cost of \$250,000. The Association is now engaged in raising the balance.

Let's make it a joint undertaking. We invite your help in this financing. Do it now with a cash contribution, a pledge, or, buy a Victory Bond in the name of The American Forestry Association and mail it to us.

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ASSOCIATION**

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Christmas Buck

(From Page 596)

Frank's folks and mine had found when they pushed back the first frontiers of America.

I looked back and stopped in astonishment. A magnificent animal stood a few feet away on the road embankment. In the semi-twilight he appeared enormous.

"That's him," Frank said. "That's the Christmas buck. He's probably been followin' us all afternoon, watchin' for a chance to use his horns where you sit down."

The big buck was still watching when we climbed in the automobile.

"I sometimes wonder," the stocky woodsman said half wistfully, "if I ain't makin' a mistake foolin' with these things here in the woods."

My look was question enough.

"What I mean is," he went on, "I'm gittin' to like these turkey and deer and trout so much I won't want nobody to

bother them when we open the season." "That big buck may make a pass at you," I said, quietly.

Frank Corley crinkled again. "My family has been living in this country for over a hundred years and it's really been a long time since we had a buck roast on the Christmas table."

I knew he was looking forward to that day, he and the folks who had brought back deer to this section of north Georgia. They had not waited for someone else to do the job. They had done it themselves. They knew that, after all, there was no Santa Claus; and man, whether he is putting money into the bank, going out of his way to be courteous and friendly, or restocking and managing his forest and game resources, will get back just exactly what he spends in money, effort and imagination.

The Frank Corleys all over the South are beginning to learn this and do something about it.

North Carolina

(From page 601)

foresters doing extension work in 31 counties. Yet county agents and soil conservation workers complain that the number is far from adequate. The State Forest Service and the Farmers' Federation expect to renew and expand similar services, now that trained men are becoming available again.

Yet it is but fair to record the fact that in certain counties farm counsellors fear that the fire hazard is too great to permit of profitable forestry. Location of the high-loss areas during the period 1940-44 inclusive is indicated in the following tabulation based on sampling:

owners account for only about eight percent, while other speculative and industrial holdings are four times as great. In the latter class there is a great opportunity for missionary work by foresters.

Public holdings add up to more than ten percent, and nearly nine percent is federal. The public is friendly toward national forests and parks, but would like to see considerable increases in state reservations, particularly state forests. Conservation leaders declare that state forest land ownership is needed to

Region	Gross Forest Acreage	Total Percent Burned in 5 yrs.	Total Acreage Burned in 5 yrs.
North Coastal Plain	4,140,752	37.8	1,565,204
South Coastal Plain	5,607,685	47.0	2,635,612
Piedmont	5,050,152	7.7	388,862
Mountains	3,998,656	1.2	47,984

Fire protection has progressed in the mountains and Piedmont. It has lagged along the coast, chiefly because funds adequate for the task have never been allocated to those regions. The present statewide budget of \$440,000 is far below that of much smaller South Carolina.

Given protection from fire, forestry will advance only as fast as landowners make progress. And forest ownership presents a not too favorable picture. Nearly half of the forest area is in farm woodlands, with 244 thousand owners; a staggering number to be reached, interested and taught. Forest industry

give stability and prestige to the state service. Practically, such ownership should facilitate training of personnel, research and the rehabilitation of damaged forest areas in many parts of the state.

A world traveler and lecturer of two decades ago was wont to mention North Carolina as one of four states destined to lead all others in cultural achievement and pleasant living. It is difficult today to name four states whose potentialities in forests and forest industries promise greater contributions to the well being of their citizens.

McNutt Joins SAF Staff

JACK J. McNUTT, assistant supervisor of the Caribou National Forest, Idaho, has been appointed associate executive secretary of the Society of American Foresters, Washington, D. C.

Born in Hanna, South Dakota, in 1908, Mr. McNutt obtained his B.S. degree in forestry at Colorado A & M College in 1933. He served with the National Park Service as ranger at Yellow-



Jack J. McNutt, assistant supervisor of the Caribou National Forest, who joins staff of Society of American Foresters

stone for five years before becoming associated with the U. S. Forest Service as district ranger, and later as assistant supervisor, in Nevada. In June 1944, he was transferred to Idaho as assistant supervisor of the Caribou.

"In addition to Mr. McNutt's experience in forest recreation and forest management over the past 12 years," Dr. Henry Schmitz, president of the Society, said in making the announcement, "he brings to his new position a background of work in range and wildlife management also. The forestry profession is composed of technicians working not only in timber management and the utilization of forest products, but in other related fields such as soil conservation, game and range management, and forest recreation and park management. With Mr. McNutt on its executive staff, the Society will be better able to advance education, research and professional practice, which are its objectives."

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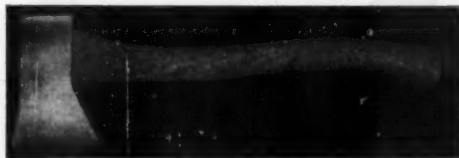


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NOTICE OF HEARING on the SIUSLAW MASTER UNIT

Dec. 3—Eugene, Ore.

UNITED STATES DEPARTMENT OF THE INTERIOR, WASHINGTON, D. C. Pursuant to the authority vested in me by the Act of August 28, 1937 (50 Stat. 874) and in accordance with 43 CFR sec. 115.4-115.5 and Circular No. 1608, it is proposed to establish the SIUSLAW MASTER UNIT, described below, in order to provide a basis for plans for the sustained-yield forest units and cooperative agreements authorized thereunder, as well as to facilitate administration under said Act. Hearings in connection with such sustained-yield forest units and cooperative agreements will be held after the establishment of the Master Unit. The boundaries, area, and location of the proposed Master Unit are as follows:

Beginning in Sec. 17, T. 15 S., R. 8 W., W.M., Oregon, at the summit of Taylor Butte, thence along the lines of legal subdivisions, southwesterly, 7 1/2 miles, around the headwaters of Deadwood Creek; southerly, 9 1/4 miles, to the Siuslaw River; southeasterly, 5 1/2 miles, around the headwaters of the drainage into the Siuslaw River, to the line between Lane and Douglas Counties, sections 1, 2, 11 and 12, T. 19 S., R. 9 W.; south-easterly, 33 1/2 miles, around the headwaters of the drainage into the Siuslaw River, on and adjacent to the boundary line between Lane and Douglas Counties to the 1/4 section corner between sections 26 and 35, T. 21 S., R. 4 W.; northeasterly and westerly, 15 miles, around the headwaters of the drainage into the Siuslaw River; northeasterly, 24 miles, around the headwaters of Wolf Creek, Noti Creek and Long Creek; westerly and southerly, 12 miles around the headwaters of Lake Creek; northeasterly, 6 miles, around the headwaters of Taylor Creek to Taylor Butte, the place of beginning, all as shown in more detail on maps of the proposed Siuslaw River Master Unit on file in the General Land Office, Washington, D. C., and in the offices of the Oregon and California Revested Lands Administration in Portland, Eugene, Roseburg, Salem, and Coos Bay, Oregon.

comprising 415,886.29 acres of forest lands under the jurisdiction of the Department of the Interior and intermingled lands in private ownership or under the administration of other public agencies, located in Lane and Douglas Counties, Oregon, and serving the following described marketing area:

All of the Master Unit itself and in addition an area to the east thereof, including that portion of the Willamette Valley bounded on the north by the northern boundary of Lane County, on the east by the range line between Ranges 1 and 2 West; on the south by the township line between townships 21 and 22 South. To the west of the Master Unit the marketing area shall include all of the main Siuslaw valley to and including the north of the Siuslaw River.

HEARINGS will be held in connection therewith commencing 10:00 A.M., December 3, 1945, at Eugene, Oregon, and will be conducted by the following representative of the Department of the Interior: Joel David Wolfsohn, Assistant Commissioner, General Land Office. The hearing will be open to the attendance of State and local officers and representatives of dependent industries, residents, and labor, and all other interested persons. Those desiring to be heard in person at such hearing must give notice thereof to the Chief Forester, O. and C. Revested Lands Administration, 901 Guardian Building, Portland 4, Oregon, no later than November 30, 1945, and those desiring to submit written statements must submit them as soon as possible before the initial date of the hearing either to the Chief Forester at the said address or to the officer in charge of the hearing. At the conclusion of the hearing, the minutes thereof, together with appropriate recommendations, will be forwarded to me. I shall thereafter take such action as I deem appropriate and due notice thereof will be given to the public. Further information as to the proposed Master Unit and applicable regulations may be obtained from Otto C. F. Krueger, District Forester, Oregon and California Revested Lands Administration, 901 Guardian Building, Portland 4, Oregon.

Harold L. Ickes

Secretary of the Interior,
Washington, D. C.

Jap Prison Camp

(From page 586)

charge of the largest area under cultivation for gardens.

Many Filipinos were mistreated, tied to posts and beaten. The dean of the College of Agriculture was taken to Fort Santiago in Manila for special "treatment." He came out of it with a broken shoulder, for which he was denied medical attention. I saw him after our release and he was getting back his health—but not his love of Japanese civilization.

As American troops in their triumphal march back to Manila neared the region of our camp, there was great concern as to what might happen to us. Reports were circulating that prisoners, soldiers and civilians alike, were being murdered by the Japs as liberation neared, and our feelings as we faced each new dawn were a mixture of anxiety and hope. The fact that our guards were daily growing more restless and irritable certainly did not salve our fears.

What our fate would have been had not rescue been miraculously staged is something to conjure with. So sudden and unexpected was this climax to our long months of imprisonment that it left us breathless and confused. In the few dramatic minutes of attack, when our lives hung by a slender thread, we crouched in shelters or sprawled under beds in bewildered silence. But when the din of battle suddenly ceased and the voices of victory-flushed American paratroopers boomed out to us, we instantly gave vent to our emotions in as boisterous a demonstration as I have ever seen or heard.

Our rescue came with dramatic suddenness one morning last February as we were preparing for roll call. Large transport planes were passing almost directly above us and as we twisted our necks to follow them, someone saw a parachute open, then another, and another. We froze in our tracks. Could this be it? We dared not hope; it was

too audacious, too improbable. Our camp was still in the heart of enemy-held territory. But suddenly the whole sky was filled with billowing parachutes, dropping earthward. And then we knew! Improbable or not, here was a daring, bold bid for our liberation.

Excitement quickly mounted to fever heat. We started to cheer, but before many could utter a sound, war was upon us. Shots rang out from the mountains above as guerrilla troops, who had stealthily surrounded the camp, closed in. They were immediately joined by the paratroopers. Then from across the lake to the north of the camp amphibian forces went into action.

Naturally, we took cover, in shelters, under beds, wherever we thought there was protection from the whistling missiles. But it was only for minutes. In less time than it takes to tell about it, the paratroopers and guerrillas had killed or disbursed the Jap guards. We were free! American audacity had liberated us!

We were told to get such things as we could carry before being loaded into the amphibians for transportation across the lake. Everywhere the emphasis was on speed, to move the 2,500 men, women and children out of enemy territory before the Japs could organize and strike back. That it was accomplished successfully is just one more tribute to the great organizing efficiency of our armed forces. Only scattered and ineffective shots were fired at us by the defeated enemy. Trucks were waiting for us at the end of the water journey, and in no time at all we were unloaded at an Army camp near Manila. Our last view of our prison was of the hated barracks being devoured by flame.

After a few weeks, when strength and health returned, we were taken to Manila, loaded on an Army transport and, under convoy, sailed for Los Angeles and home.

Though happy over freedom and regained health, my return to Manila was



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saddened by the discovery that trees I had grown in the school nursery at Los Baños, transplanted in that city and nursed into beautiful growth, had been destroyed. They drooped forlornly over the rubble of the war-torn city. Another unpleasant note at parting came from Los Baños. A Japanese force, furious at our rescue, returned to the forest school and burned and destroyed all of the buildings, including homes and library, and killed or drove into the woods the school personnel. Records of our work for more than 40 years went up in flame. This, with the cutting of the trees by the Japanese—trees that were the source of our information on growth—is a real loss to tropical forestry.

But, fortunately, the bulk of the forest wealth of the Philippines still remains and is today helping to heal the scars of war. Better still for the future of these forests is the fact that in the trained minds of hundreds of Filipino forest officers there is the knowledge that assures the continuance of school and forest management that will, in spite of great difficulties, solve the islands' forest problems.

They have in their hands the most wonderful hardwood forest I have ever seen, a forest which in the immediate future will be a great factor in solving war-created problems. Cut with care and intelligently renewed, it can support thousands of workers, be reproduced in 40 to 50 years. If roads are built and wood-using industries brought to the forest, a wealth can be created that will care for the educational and transportation problems of the future.

Holly

(From page 604)

law. Some dealers have threatened to leave the state and work in areas where such drastic restrictions are not imposed.

In the past ten years there has slowly but steadily developed an ever-increasing number of individuals interested in holly—some in its beauty, others in growing and marketing trees. For example, a small number of New Jerseyites have been meeting in that state to discuss holly. This group, known as the New Jersey Holly Research Committee, recently published some of the results of its research in a concise, eight-page circular, *Growing Holly*.

The personnel of the Hillculture Section of the U. S. Soil Conservation Service has made outstanding contributions to the increase of dependable information on holly. Prior to wartime curtailments, technicians of this organization were locating and selecting holly of unusual beauty and form. Such selec-

(Turn to page 619)



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DESTRUCTIVE AND USEFUL INSECTS, by S. W. Frost. Published by McGraw-Hill Book Company, New York, N. Y. 524 pages, illustrated. Price \$4.00.

Written by a professor of entomology at the University of Illinois, this textbook is intended for elementary college entomology students and as an introduction for more advanced insect studies. Rather than dealing with individual characteristics of insects, it emphasizes the scope of the field and stresses immature habits and forms. Serious economic losses in recent years have caused the field of entomology to expand enormously and new discoveries made during the past decade have been included in this volume, making it a valuable source of information for even the best informed entomologists.

ONE DAY ON BEETLE ROCK, by Sally Garrighar. Published by Alfred Knopf, New York, N. Y. 196 pages, illustrated. Price \$2.75.

Seldom does one find a book on the creatures of the woods so revealing, so intensely moving or so realistically told as this account of one day in the woods. Each chapter is devoted to one of nine creatures whose paths cross in dramatic fashion. From the predacious coyote to the gentle Sierra grouse, each is described with such accuracy and insight the reader finds himself possessed of new vision and understanding.

THE WOODY PLANTS OF MAINE, by Fay Hyland and Ferdinand H. Steinmetz. Published by University Press, Orono, Me. 72 pages, illustrated. Price, 50c. This is an accurate catalog of the plants of one of the most botanically interesting of the states.

THE NEW CHEMICAL FORMULARY—VOLUME VI, by H. Bennett, Editor-in-Chief. Published by Chemical Publishing Company, Inc., Brooklyn, New York. 636 pages. Price \$6.00.

Sixth of a series of volumes compiled for the amateur chemist containing elementary formulae and recipes for making thousands of products in many fields of industry. These books could well open the door to a new and lucrative hobby for those who have space and time for a home laboratory.

THE CHEMISTRY OF CELLULOSE, by Emil Heuser. Published by John Wiley and Sons, Inc., New York, N. Y. 660 pages, illustrated. Price \$7.50.

This is a coherent scientific treatise of the chemistry of cellulose which should be of great value to those in industrial and research laboratories as well as to scholars who wish to find guidance for their studies. The author succeeded in assembling essential literature on the subject to a remarkable extent considering wartime restrictions on European publications.

Book News

A list of Selected Books on Forestry and related fields of Conservation is available to members of The American Forestry Association on request.

THE CANVASBACK ON A PRAIRIE MARSH, by H. Albert Hochbaum. Published by The American Wildlife Institute, Washington, D. C. 201 pages, illustrated. Price \$3.00.

This comprehensive study of the territorial behavior of ducks breaks new ground for science. It is not too highly scientific to be read with pleasure by the layman and will recall to the nimrod many pleasant memories of the stirring sight of long lines of ducks flying through the grey autumn skies. It contains numerous facts which will be useful to the thoughtful sportsman in identifying his ducks, offering in addition, a better understanding of the broad conservation problems involved in the maintenance of wildlife.

JOHN TORREY, by Andrew Denny Rodgers III. Published by Princeton University Press. 352 pages. Price \$3.75.

This is a biographical work about John Torrey, pioneer botanist of North America, written in a vivid, informed style. It contains an abundance of material about the shy though radiant personality who has been described as "friend and helper" of every young American botanist. The descriptions of botanical explorations are rich with accounts of the thrills and entertaining adventures that constituted the background of John Torrey's achievements.

THE CONSERVATION OF NATURAL RESOURCES, by H. Basil Wales and H. O. Lathrop. Published by Laurel Book Company, Chicago, Illinois. 554 pages, illustrated. Price \$2.00.

Written for the purpose of inducing schools to offer a special course on the best methods of conservation, this book will be a useful reference text in connection with related courses. Also, it should bring about a broader understanding of the conservation program and its application to our everyday life, for its style is simple, clear and complete.

TREES OF PUERTO RICO, Volume II, by L. R. Holdridge. Published by the U. S. Department of Agriculture, Forest Service. 104 pages, illustrated.

Second of a series intended to cover all tree species found in Puerto Rico, this book contains descriptions and illustrations of an additional fifty species.

The publications listed below must be ordered direct from the addresses as given and not through the Association.

Approximate Forest Area and Timber Volume by County in the Carolinas and Virginia, by J. W. Cruikshank and T. C. Evans—a forest survey progress report. For. Surv. Rel. No. 19. For. Serv., U.S.D.A., Appalachian For. Exp. Sta., Asheville, N. C.

Report of the State Commission of Forestry for South Carolina. Charles H. Flory, State Forester, Columbia, S. C.

Federal-State Cooperative Snow Surveys and Irrigation Water Forecasts for Columbia Basin. Div. of Irrigation, Soil Cons. Serv., U.S.D.A., Washington, D. C.

Green Gold of the El Dorado. Published by the Camino Tree Farm, El Dorado County, Calif.

Conference Report on New Developments in Wood Products. Published by the New York State College of Forestry, Syracuse University, Syracuse, N. Y.

Don't Kill the Forest Goose. For. Ser. U.S.D.A. Supt. of Docs., Wash., D.C.

The Forest Situation in California. Report to the Legislature by California Forestry Study Committee. Committee on Elections, California State Senate, Sacramento, Calif.

New Income from Farm Woods and Idle Lands. Sears Farmers' Market, Atlanta, Ga.

Coyote Control by Means of Den Hunting. By Stanley P. Young and Harold W. Dobyns. Circ. 7, Fish and Wildlife Service, U. S. Dept. of Interior. Supt. of Docs., Wash., D. C. Price, 5 cents.

Connecticut State Board of Fisheries and Game—Biennial Report. Published by the State at Hartford, Conn.

Retroactive Zoning for Elimination of Rural Billboards. California Roadside Council, Box 4450, San Francisco, California.

Timber and Game—Twin Crops, by Harold Titus. Published by American Forest Products Industries, 1319 18th St., Wash., D. C.

Reducing Damage to Trees from Construction Work, by Marvin E. Fowler, G. F. Gravatt and A. Robert Thompson. Farmer's Bull. No. 1967, U. S. D.A. Supt. of Docs., Wash., D. C. Price, 10 cents.

Cover, by E. Laurence Palmer. Cornell Rural School Leaflet, Vol. 30, No. 4. Published by the New York State College of Agriculture, Ithaca, N. Y.

The Blacks Mountain Portable Log Loader, by A. A. Hasel. For. Serv., U.S.D.A., Calif. For. and Range Expt. Sta., Berkeley, Calif.

Holly

(From page 517)

tions were studied for their ease of propagation and general usefulness.

It has long been evident that there is need for some type of an organization for exchanges of ideas and information on holly. In March, 1944, F. L. O'Rourke, of the Soil Conservation Service, and the writer invited individuals with known interest in holly to attend a meeting at the University of Maryland, the purpose of which was to discuss a proposed Maryland Holly Society.

The response was gratifying. The Society was set up with the following basic objectives: To collect and disseminate practical and useful information about holly; to study methods of conservatively cutting market holly for Christmas decorations; to promote research in the various cultural and physiological aspects of growing holly; to locate and preserve, if possible, holly stands of extraordinary natural beauty; and to encourage the establishment of "Living Memorials" of either arboretums or natural holly stands.

A tentative memorial grove has been selected for future development near Washington, D. C. In addition, the Salisbury State Teachers College is planning to establish a holly arboretum as a "Living Memorial" to former students serving in the armed forces.

Indians

(From page 591)

ury. It was certified because of the legal tender requirements of the State of Wisconsin, which call for cash, money order, or certified check, and so a stamp was made and the Government check for \$1,590,854 was duly certified and delivered. Now, at last, the Menominees may claim undisputed ownership of their entire reservation.

Lumber

(From page 606)

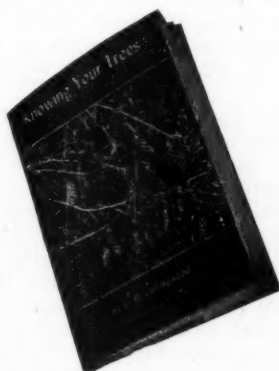
these items were for the most part overcome by the end of 1943.

In 1943 a radical change took place in the character of the demand for softwoods as a consequence of the shift in our military position. Boxes, crates and dunnage emerged as the dominant users of softwood, and later of all lumber. As the United States grew in its role of world arsenal and then moved from the defensive to the offensive, an almost insatiable appetite developed for any kind of wood that could be used to package and protect shipments of cargoes in transit. In normal times, boxes, crates, and dunnage accounted for only 15 percent of total lumber consumption, or around four billion feet a year. This

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demand doubled in 1942, and in 1943 continued up almost on a straight line to a point where it claimed 40 percent of the new mill cuttings.

In 1943, also, came several other developments which had an immediate and lasting influence on the lumber situation. The military accelerated its purchases of lumber to be shipped overseas for construction of air and naval bases, harbors, barracks and railroads. Pressure on the metals was unrelenting, and substitution of lumber for production and construction, as well as for shipping purposes, continued. By that time, lumber had itself become critical, and orders could be filled only by drawing down stocks another four billion feet.

General scarcities of quite another kind—manpower and equipment—began to limit the output of lumber. The equipment and labor shortages resulted in a five percent decline in lumber production during 1943 and caused a further reduction of six percent in 1944, when only 32.5 billion feet were produced.

By the early spring of 1944 it was clear that comprehensive controls over lumber production, distribution and consumption must be instituted.

A decline in supply of at least five percent from 1943 was forecast for 1944. There was every indication that demand, unless checked, would run a good 20 percent beyond supply. No early relief could be expected on the manpower front—the draft and higher-paying war industries would continue taking men out of the woods and sawmills. Inventories—already well below 50 percent of prewar levels—could no longer be depended upon to make any significant contribution. The equipment problems faced by the industry were certain to get worse rather than better. Finally, the existing patchwork of orders in the lumber field had not only failed to bring demand into line with supply, but also had proved ineffective in channeling the limited output to the most essential uses.

Earlier controls, applied piecemeal by species, had obvious weaknesses. No quantitative limit was placed on procurement by the services. Artificial deficits were created throughout the lumber system by the common practice of multiple placement of orders. Above all, no machinery was provided for balancing total supply against total demand and distributing the available lumber

equitably to the more important war-connected uses.

The lumber control program set up under Order L-335 attempted to resolve all these difficulties. Large industrial consumers were placed under a quarterly application-authorization procedure for all their lumber requirements. Military and export claimants filed consolidated quarterly applications for their direct requirements. A special quarterly application-authorization procedure was also set up by WFA and NHA, the principal claimants for construction lumber. Other rated construction and small industrial users (under 50,000 board feet a quarter) were allowed to procure by self-certification. The whole plan operated through a quarterly balancing of supply and demand, a Requirements Committee "pie cut," quantitative control over authorizations (cutting directives and mill set-asides for the military).

The system was effective in channeling lumber to direct and indirect military and essential civilian uses, and was sufficiently flexible in operation to deal equally well with the rapid decline in requirements during the fourth quarter of 1944 and the abrupt upswing in the first quarter of 1945. Mill and yard stocks, which had been drained to dangerously low levels, were stabilized. Inventories of industrial consumers were reduced (from over 60 days' supply to 54 days') without disrupting their operations. Duplication and pyramiding of orders were eliminated. The services effected improvements in procurement, inventory control, and lumber utilization.

It is estimated that direct military procurement will drop in the next few months about 75 percent below pre-V-J Day levels, freeing slightly over a billion feet a quarter. In addition, it is believed that the indirect military use of lumber—mainly for the boxes, crates, and dunnage used by war contractors and shipping agents—will fall at least 50 percent, resulting in an immediate release of about one and a half billion feet more a quarter.

The only significant limiting factor is the drying time necessary to make seasoned lumber of standard specifications available where and when needed. This is a pipelining job which should progress far enough in the next 60 days to take care of all foreseeable demands for delivery in the fourth quarter of this year.

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Throughout the war export has been held to a minimum. In 1944, for example, it amounted to only 400 million board feet, against the 1935-39 average of more than a billion. Without restrictions, export demand would probably take double the recent (250 million feet quarterly) rate of shipments, beginning in the current quarter. Shipments of this volume—twice those of the late 1930's—would provide not only for all requests for United States lumber filed by liberated areas, but for peacetime inquiries from normal export destinations as well.

In view of the estimated surplus above requirements for consumption, no controls of any description other than general WPB inventory regulations will be retained over domestic distribution of lumber after September 30. FEA

will continue individual license control over the export of lumber and over most of the major lumber items, and quantitative limits have been arranged between WPB and FEA for the fourth quarter.

It is doubtful if lumber supplies available to civilians will at any time, except in the next 60 days, exert a retarding influence on national reconversion, unless production losses from the current labor troubles reach large proportions. For a few more weeks dry lumber of standard grades and sizes will not be available for every call. But the season of the year operates to minimize the impact on new construction and on other lines of activity which have been restrained in their lumber purchases during the war, such as farm, railroad and urban residential repair.

Dr. John C. Merriam

(From page 597)

temporary advantage, or to take a defeatist attitude,—all these are elements that entered into Dr. Merriam's leadership in the Save-the-Redwoods movement.

No one surely has contributed more than Dr. Merriam to that body of thought that might be summed up as the National Park Concept. For many years he worked in this field, serving as chairman of the Committee on Educational Problems of the National Parks and traveling to many of the areas. His summers particularly were devoted to this self-imposed task. His efforts helped to make the unique character of the national parks clear to the people of America.

Close touch with reality, essential to a scientist, was always emphasized by Dr. Merriam as necessary to an understanding of the meaning of great landscapes. Thus his impatience with the dead exhibits of museums, when they attempt to supplant the works of nature. His years of experience with the finer of the national parks bore fruit not alone in clear and uncompromising statement of principles presenting an ideal to govern the public use and enjoyment of these masterpieces. In at least two cases his patient study and planning brought the establishment of mechanisms whereby the visitor, be he casual or student, cannot fail to realize the significance of what is before him. At Yavapai Station on the brink of the Grand Canyon, means are provided for reading directly from the book of nature and gaining a conception of the dramatic story unfolded by this "abyss in time." Likewise, at Sinnott Memorial, the beauty and meaning of Crater Lake are revealed from a point of vantage where the beholder is guided to see and understand.

Much might be quoted from his writings about the national parks which would illustrate Dr. Merriam's attempt to interpret the meaning behind the scenery, and his desire to stimulate thought on this subject. The following, again from *The Living Past*, is typical:

"The influence upon every visitor who stands on the brink of the Grand Canyon, whether it be mainly in terms of size and beauty or only in framing the questions 'how' and 'why?' means an opening of the mind to new and greater personal experience. Appreciation of what lies beyond the most obvious aspects of the story may be slight, but those who search for an interpretation receive at least a faint suggestion of the 'something that has happened.' The physical abyss impresses with its majesty and power. The matchless architecture, the colors spread in unimagined ways, the changing hues of atmosphere and sky and shadow, all bring unflinching joy. With no less vital reality, the vision of time presents itself like the opening of a door upon the past. Perhaps even more striking than the contrast of physical grandeur of the Gorge with the gullies and canyons of our previous acquaintance, is the comparison of this great chasm of ages with the measure of passing years as we have fathomed them."

The play of this man's thought, his philosophy, always permeated by the sense of time, led to a dramatic passage that concludes his chapter, "Footprints on the Path of History." At the Carson State Prison in Nevada, the yard consisted of an area that had been quarried for building stone. On the floor, thus uncovered, laid down and solidified millions of years before, were imprints of the feet of many prehistoric animals,

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crossing the space to where they disappeared beneath the tons of rock of the unexcavated cliff. Prisoners passed and repassed them day by day. Contemplating them, Dr. Merriam wrote:

"Of all possibilities in the world, a prison provides the situation in which meditation on the past might be expected to have largest place. I often wonder whether at Carson Prison Yard the men who have constantly before them this almost miraculous preservation of evidence of what happened in a remote age, consider it a suggestion that no time is too long after an event for the uncovering of what has happened. Or does it indicate to them that not years, nor the elements, nor anything, may take

away the influence of a mark once made? Or is the story to them as I would see it—that is, the evidence that in this changing world in which we live there is always hope that something better may be built?"

It was on this note that he thought and worked, intent upon revealing something of the beauty and the meaning of the world of nature.

(Dr. Merriam was elected to the Board of Directors of The American Forestry Association in 1925 and served continuously through 1941. During this long term of office his counsel was of great value in the shaping of Association policies and in the conduct of its affairs—*Editor.*)

Basket Maker

(From page 593)

spokes of a wheel. Here the bare foot is employed to hold them in position. The smooth sole of a shoe would permit them to slip.

For most basket work, Morgan uses only white oak. Black oak is used for hoops for certain types of baskets and for "springs." The latter, used for fish or oyster baskets which are subjected to rough use, are forced through the outside weaving, after being dipped in grease, and extend into the cone on the

bottom of the basket. They look like the letter "V" with one side shorter than the other. "Springs" have to be boiled or steamed to be shaped, thus making them one job Morgan does not like.

One of Clarence Morgan's proudest possessions is a basket his grandfather made for his mother's wedding 62 years ago. This she used all her life, and it is as good now as the day it was made. Great basket makers, these Morgans.

The First American Christmas Tree

(From page 587)

ing ornaments for these trees.

Up until recently, the distinction of having introduced the Christmas tree in America was given to a Wooster, Ohio, resident named August Imgard. The year was 1847. The story is that Imgard, a tailor, came to this country to join his brother Fred, who was established in business at Wooster. Another incentive, it is said, was that the sisters Catherine and Jeanette Nold, old-country sweethearts of the brothers, had settled in Wooster. Anyway, the

prospect of a dismal first Christmas away from his native hearth weighed heavily upon the young German. So he decided to do something about it—to bring to his newly adopted country some of the hominess he had loved so much in quaint old Hussia.

To his young nephew and niece he would show, if at all possible, how Christmas was celebrated in the old country. In earlier hikes into the hilly neighborhood he had spied a suitable spruce tree and, as he relates: "When I got to where the trees were I found the water so high I could not get across. So I walked along until I found a tree fallen from bank to bank and crossed on that. I cut a tree and carried it to the fallen log. But to get across this time I had to tie the tree to my neck and crawl on hands and feet. People looked at me with considerable curiosity when I walked through town with my tree."

When it was finally set up in his brother's home, Imgard cut his own paper adornments and a local tinsmith fashioned a shiny star for the top. That the result was a sensation for the little city of Wooster can well be imagined. People of all ages came

and gazed, and approved of the "pretty idea." So much appeal did this tree find in the hearts of the local folk that during the next Christmas season tradition has it that all Wooster enjoyed Christmas trees.

Older German families and the Forty-eighters who came to Wooster found in the tree a tie with the homeland, and they helped perpetuate the usage. August Imgard was a plain and industrious man and he and his brother had a flourishing business. In Cleveland, at the dedication of a special light display in 1938, Imgard was first publicly celebrated as the originator of the American Christmas tree.

Because it is good copy, Imgard's story appeared year in and year out in various Ohio newspapers. The fact that spruce is not native to the country around Wooster was lightly overlooked by the editors. Indeed, it seemed to have made little difference to the people of Wooster.

The story persisted. And because it did, the editors of the *American German Review*, always interested in folk customs of German immigrants, asked the writer to investigate its sources—and the possibilities of even earlier trees. This he did, and as a result of his findings the editors instigated a nation-wide hunt. Six discoveries now antedate the Wooster tree.

It should be brought out at this point that the New England Puritans did not celebrate Christmas, and that Christmas festivities in the South and West before 1840 were altogether different from our present practice. Thus it is only natural that search for the first tree should prove more fruitful in the East and Middle West, particularly in those regions receiving the bulk of the influx of Germans into this country in the early thirties and forties of the last century.

Among the first discoveries were two trees in Rochester, New York, one of which dated back to 1840. Both trees were used in churches, the 1840 tree adorned with lights, toys and sweetmeats. The other, dating around 1847, was on exhibit at a pageant to which adults paid twenty-five cents and children twelve and a half cents.

It is interesting to note that use of trees by churches in Rochester failed to cause serious disturbance as did a tree in Cleveland in 1851. There a Lutheran minister, Henry C. Schwan, who had just come from Germany, almost lost his pulpit and his parishioners were called idolatrous and other names because they had set up a tree, something so pagan and un-

natural, in their church. In Rochester, a non-German citizen found the first incident curious enough that he described it for the readers of the *Rochester Daily Advertiser*.

While the Rochester trees were used by German Protestant churches, a Presbyterian minister in Philadelphia, the Reverend Theodore Ledyard Cuyler, exhibited a Christmas tree in 1841. To quote from a personal letter of his: "On Thursday evening we had our annual soiree at the school. The parents were invited. . . . We had a large 'Christmas Tree' which was a great attraction and novelty . . . it was decorated with the coat of arms of the boys, fanciful designs, and ribands, and looked beautiful. . . ."

The next important discovery was in Cincinnati, where the personal memoirs of the Krausnick family mentioned a Christmas tree in 1835. This was followed by the finding in Philadelphia of records of a tree in 1834.

A German doctor, Constantin Hering, and a teacher friend, Friederich Knorr, had found the Christmas of 1833 rather bleak. So the following season they decided to make a change. Ferrying across the Delaware, they found fir trees in New Jersey and brought them back to the City of Brotherly Love. As may be expected, their action caused quite a stir. Small boys shouted after them as they carried the trees on their backs through the streets. But the friends were not to be discouraged. The doctor appointed evenings when his patients

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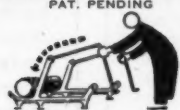
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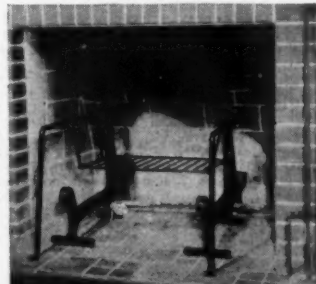
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and friends could come and see the lighted tree.

Dr. Hering, who died in 1880, had the joy of many happy Christmas celebrations around a lighted tree. And, it is said, he had the satisfaction of having introduced this beautiful custom in Philadelphia. The teacher Knorr seemingly found a tragic end. One December evening just after dusk he left his home to place an order for coal at a yard near the river. He was never seen again, nor was the mystery of his disappearance ever solved, though suspicion was cast on characters called "Schuylkill Rangers" who were known to prowl in the neighborhood.

In 1920, the now extinct *Fort Dearborn Magazine* published an unsigned article entitled "Christmas at Old Fort Dearborn," an account of holiday festivities in 1804 compiled from old records and interviews with descendants of early settlers. The following is quoted from this article:

"Christmas in 1804—a time of good cheer, of merry greetings, and of thanksgiving for the safety of the company gathered together. Outside of the wooden stockade was unfriendly cold, with the prairies to the south a snowy desert broken only by the footprints of prowling wolves. The river was icy and the desolate lake was frozen, but all this was forgotten in the joys of a well laden table. Venison pastry, roast pig, turkeys, prairie chicken, rabbit and raccoon had been prepared from the booty which the soldiers and *coureurs de bois* had elatedly presented from their hunt of the previous day.

Captain Whistler had ordered a tree from the grove of pine and spruce on the hills that skirted the lake shore to the north of the river. A few of the boys dragged the tree across the river by means of ropes to its place of honor amongst the festivities. . ."

The point that makes this story a bit questionable is that Captain Whistler came from northern Ireland and a Christmas tree was unknown in the British Isles in the eighteenth century, unless Whistler had adopted the tree from the Hessians with whom he had fought in the War of the Revolution. That the Hessians had Christmas trees, however, lacks, as yet, definite evidence.

Thus the search for the first American Christmas tree is still wide open. Historical research has moved it back from the Wooster tree of 1847 to the Philadelphia tree of 1834—possibly, if more authoritative evidence can be obtained, to the Fort Dearborn tree of 1804. What future investigation will reveal remains to be seen, but somewhere in old letters, in private diaries, or in earliest newspaper accounts the key to the first tree to bring joy to the American home at Christmas will be found. Needless to say, Americans everywhere can aid in this worthy search by carefully examining old documents and newspapers accessible to them.

(The participation of all readers of AMERICAN FORESTS in this search for the first American Christmas tree is invited. Important clues or findings should be mailed to Professor William I. Schreiber, College of Wooster, Wooster, Ohio.—EDITOR.)

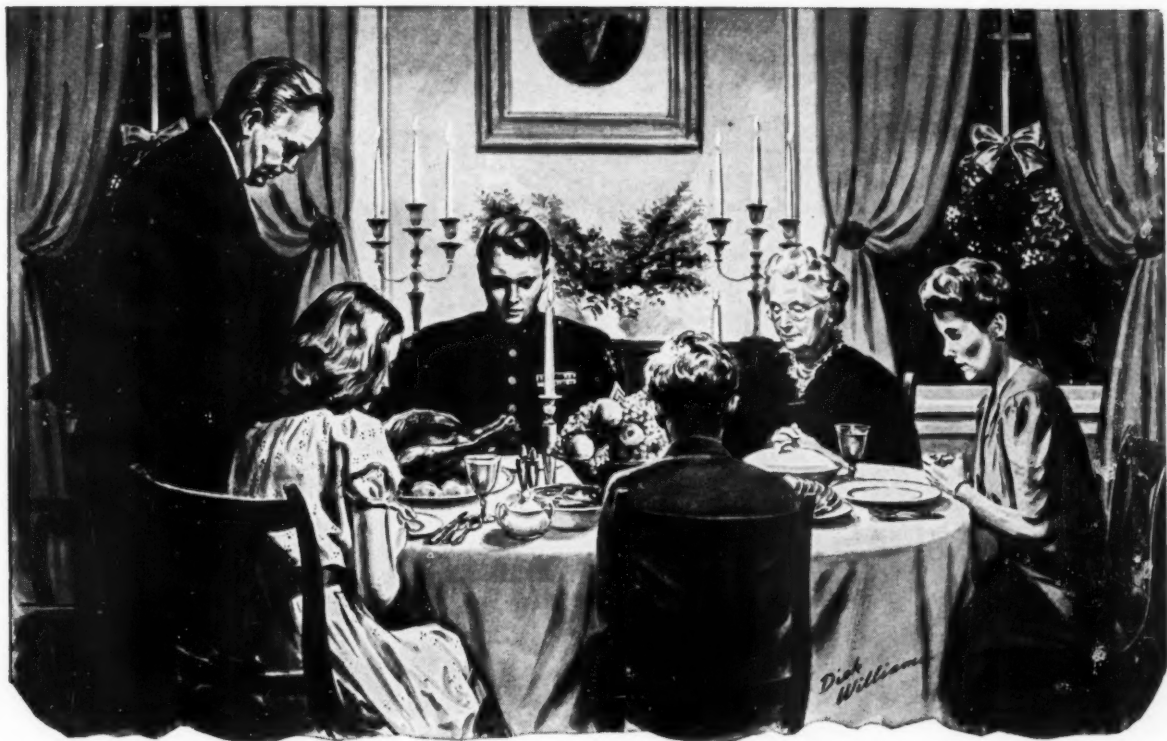
AUTHORS and PHOTO CREDITS

ALDEN T. COTTRELL (*Basket Maker of Dividing Creek*) is chief of the Bureau of Public Relations, New Jersey Department of Conservation. HUGH M. CURRAN (*Three Years in a Jap Prison Camp*) was professor of tropical forestry, Philippine Forest School, when war broke out. CHARLES ELLIOTT (*Christmas Buck*) is director of Georgia's Game and Fish Commission. CHARLES R. ROSS (*Forestry at the Crossroads in North Carolina*) is regional consultant for The American Forestry Association's Forest Resource Appraisal; GEORGE K. SLOCUM, collaborating on the North Carolina appraisal, is associate professor of forestry at the North Carolina State College. WILLIAM I. SCHREIBER (*The First American Christmas Tree*) is a member of the faculty of the College of Wooster, Ohio. PHILIP L. SEMAN (*An Artist Interprets the Forest*) is general director of the Jewish People's Institute in Chicago. EDITHA L. WATSON (*Giving the Forest Back to the Indians*) is with the Office of Indian Affairs. H. G. WILM (*Worlds Beyond Ours*) is in charge of forest influences research for the Rocky Mountain Forest and Range Experiment Station, U. S. Forest Service.

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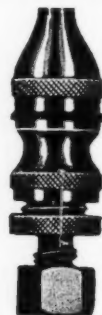
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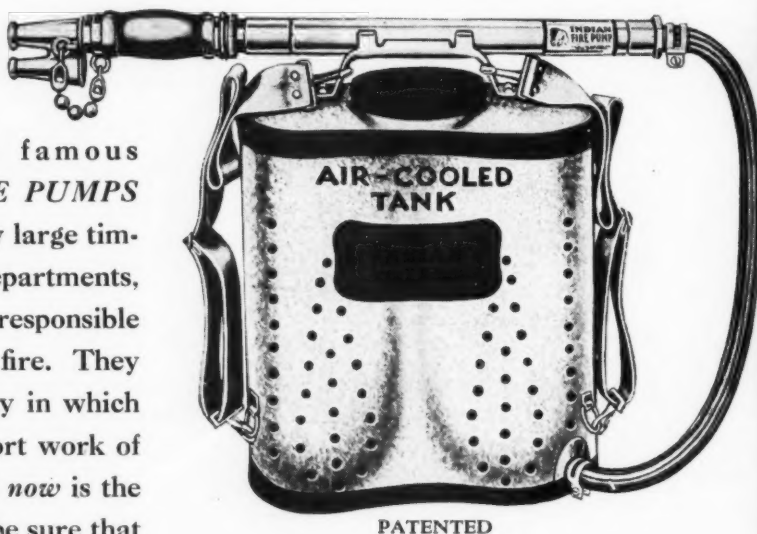


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